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Broadcasting Series

STERLING FISHER AND RUSSELL POTTER
CONSULTING EDITORS

Music in Radio Broadcasting

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NBC-Columbia University Broadcasting Series

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BROOKS—Radio and Television News Services
(IN PREPARATION)

CHASE—Music in Radio Broadcasting

ROYAL—Television Broadcasting
(IN PREPARATION)

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Music in Radio Broadcasting

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FIRST EDITION
SECOND IMPRESSION

McGraw-Hill Book Company, Inc.
NEW YORK 1946 LONDON

MUSIC IN RADIO BROADCASTING

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THE MAPLE PRESS COMPANY, YORK, PA.

Preface

This book is based on the course Music For Radio given by Columbia University Extension in cooperation with the National Broadcasting Company. It is the first book devoted exclusively to music in radio broadcasting.

When the author was asked to outline a fifteen-week course on music for radio, it meant pioneering in a new field and finding the answer to problems for which there was no precedent either in academic tradition or in practical experience. The importance of music in radio was obvious. Nothing, in fact, could be more important. But there was no tried and tested recipe for boiling down this vast and complex subject so that it could be readily assimilated by students in a fifteen-week university extension course.

Such subjects as announcing, script-writing, acting, and directing are sufficiently specific and sufficiently specialized to be taught in terms of their respective techniques. But in the case of music we are dealing with a complex art made up of many specific and specialized techniques: composing, performing, conducting, arranging, and so forth. In addition, there are such specialized aspects of music for radio as clearance rights, library organization, program building, continuity writing, and production. To have covered all these with complete thoroughness would have necessitated a series of courses on music. And this, in turn, would have involved endless complications in the way of teaching personnel, studio facilities, supervision, etc.

Such subjects as conducting, composing, and arranging music for radio involve a superspecialized instruction. That is, they require the teaching of even more specialized techniques to persons who already have special training in those lines. Before you can profitably learn about composing for radio, you must have previously mastered the elements of compo-

sition. The same is true for conducting or arranging. Perhaps the day will come when advanced courses in radio techniques will be given to trained musicians on the graduate level; but that was not exactly our problem in this case. We could not assume that all our students would be highly trained musicians or that they would all wish to specialize in some particular branch of music in radio. Our solution, therefore, was to plan a general orientation course—a course that would cover all aspects of music as it is used in broadcasting without attempting to teach the applied techniques of any one of them.

The course, then, provided the students with an opportunity to hear experts in all branches of musical broadcastng talk on their respective subjects with the authority that comes from long experience and recognized achievement. And that is exactly what this book does—although, unfortunately, it cannot bring to the reader the actual living presence of the speakers. Yet it does bring him their thoughts and their personalities as these are expressed in their words. As a glance through the biographical sketches that follow will reveal, these men, whose names are well known in radio, have had long and varied experience in many aspects of broadcasting. Thanks to the force of their personalities and their diversified backgrounds, this volume is more than a compendium of information. It is designed to be practical and concretely helpful all the way through, and in addition it reflects the personal views and characters of the individual contributors. Because they are interesting individuals who speak from personal knowledge and experience, their contributions to this book are of permanent value, as are the important contributions to radio made in their professional work.

GILBERT CHASE.

NEW YORK, N. Y.,
July, 1946.

Contributors

THOMAS H. BELVISO played first violin in the symphony orchestra of his native city, New Haven, at the age of thirteen. Later he continued his musical studies at Yale University and at the Institute of Musical Art in New York. At twenty-three he became general music director of Paramount Theatres, in New England. In 1930 he joined the National Broadcasting Company as program builder and conductor, and two years later he was put in charge of the Music Rights Division, which clears all music performed by NBC. In addition, he has supervision over the following NBC musical activities: composing, arranging, music traffic, and the music library.

TOM BENNETT, a native New Yorker, entered broadcasting in 1933, as arranger and composer for radio shows. Since 1938 he has held various positions with NBC, including those of production director, staff composer, assistant director of program development, and assistant production manager in charge of variety shows. He has resigned the last-mentioned post to devote his entire time to directing, composing, and arranging. As a production director for NBC he is currently producing the Fred Waring show. He directed the broadcasts of the unique Basin Street Chamber Music Society in its early days.

FRANK J. BLACK began his radio career in 1922 as director of a weekly broadcast in his native city, Philadelphia. He has had varied experience as pianist, theater conductor, music-publishing executive, arranger, and composer. Since 1932 he has been General Music Director of the National Broadcasting Company and has frequently appeared as conductor of the NBC Symphony Orchestra. His original scores for outstanding radio dramas include music for *The White Cliffs of Dover* (Alice Duer Miller) and *Murder of Lidice* (Edna St. Vincent Millay).

GILBERT CHASE, formerly on the staff of the Music Division of the Library of Congress, has been Supervisor of Music for the NBC University of the Air since 1943. From 1929 to 1935 he was music critic of the *Continental Daily Mail* in Paris and correspondent for *Musical America*. He is the author of *The Music of Spain* (1941) and *Guide to Latin American Music* (1945), also of the scripts and handbooks for the NBC music series, Music of the New World and The Story of Music.

SAMUEL CHOTZINOFF, Manager of the NBC Music Division since 1937, was born in Vitebsk, Russia, and was educated in the United States at Columbia University, where he studied music with Daniel Gregory Mason. As pianist, he has been accompanist to Heifetz, Zimbalist, and Alma Gluck. He was music critic of the *New York World* from 1925 to 1930, and of the *New York Post* from 1933 to 1939. He is the author of *Eroica*, a fictionized life of Beethoven.

EDWIN L. DUNHAM has been in radio since its infancy, for he started working as an announcer in 1920. He joined the National Broadcasting Company in 1929 as a production director. A period of several years as radio director for an advertising agency was followed by his return to NBC in 1938. Since then he has been director for The Voice of Firestone, The Army Hour, and many other notable programs. His musical experience includes playing the organ both as accompanist and as soloist.

HERBERT GRAF was born in Vienna and graduated from the university of that city, receiving his Ph.D. in 1928. He studied music and stage directing at the Vienna State Academy, and then held various positions as operatic stage director in Europe. In 1934 he came to America as stage director for the Philadelphia Opera Company. Since 1936 he has held a similar position at the Metropolitan Opera House

in New York, besides acting as guest director in many other important opera houses. In 1944 he was appointed Director of Operatic Productions for NBC's Television Department.

DAVID HALL is on the staff of NBC's script division and specializes in writing continuity for programs of "serious" music. He is continuity writer and program annotator for the General Motors Symphony of the Air. He majored in psychology at Yale University and did graduate work at Columbia University. Known as an authority on recorded music, he is the author of *The Record Book*, and owns a library of more than 4,000 records.

ERNEST LA PRADE, born in Memphis, Tennessee, studied violin at the Cincinnati College of Music and the Royal Conservatory of Music in Brussels. From 1919 to 1928 he was violinist in the New York Symphony Orchestra. He joined the National Broadcasting Company in 1929 and since 1935 has been NBC Director of Music Research. He is the author of *Alice in Orchestralia* (1925) and *Marching Notes* (1929), also of numerous articles on music in radio.

MORRIS MAMORSKY, NBC Staff Composer, was born in Ansonia, Connecticut, and is a graduate of the Yale School of Music (Mus. B., 1937). In 1939 his Piano Concerto was awarded the Paderewski Fund Prize. He has composed and conducted the music for numerous NBC dramatic shows, including Words at War, That They Might Live, Arthur Hopkins Presents, The American Story, and The World's Great Novels.

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Music in Radio

BY SAMUEL CHOTZINOFF

WHEN one speaks of music in radio one is thinking of a long-established and vital art as it reaches the public through a new medium. However, to think of radio simply as a device that automatically and faithfully transmits music from the studio or the concert hall to the ear of the listener at home would be erroneous. The technical advance of broadcasting, it is true, has tended to approximate with ever-increasing fidelity the sound of music as it is heard in actual performance. Indeed, the possibility of someday achieving absolute fidelity to the living model is precisely what justifies our calling radio an art and not merely a gadget. For no matter how much radio may progress as a science, its artistic result will depend in a great measure on the imagination, the ingenuity, and the integrity of those who have the responsibility for supervising the transmission of music over the air waves.

It is obvious that the ideal of radio should be to transmit the sounds that the cultured listener hears when he is present at an actual performance, and not merely to substitute another version of such sounds. This is the ideal that we who work in radio always keep before us, though we may frequently fall short of realizing it. Perhaps complete realization of this ideal is many years off. It is, therefore, imperative that the men and women who would take up the profession of music in radio should be conscious of the ideal and possess the knowledge and the taste

to work toward fulfillment of it. Here I would like to say that, while both knowledge and taste are essential to the interpretation and dissemination of art, taste is, in my opinion, more important than knowledge; for knowledge is concerned with the ingredients of art, while taste is the higher function of sensing the delicate relation of the ingredients to the whole. Just as, in the creation of art, inspiration is more important than knowledge, so in the purveying of art, taste is on a plane with the inspiration that is paramount in the creation of art.

DEVELOPMENT OF A NEW MEDIUM FOR MUSIC

The development of radio has been so rapid that most of us can remember the curious era of headphones and improvised receivers, when small boys and adventurous youths spent most of their time in an exciting effort to make contact, via the ether, with other radio fans in different cities and in picking up messages radioed from ships at sea and from coast-guard stations. This very personalized radio communication was even then of special importance to humanity; for when the great catastrophe of the sinking of the *Titanic* occurred in 1912, a young radio operator, David Sarnoff by name, sat atop the Wanamaker Building on Eighth Street and, with radio phones clamped to his ears, noted down the survivors as their names were sent through the ether from the coast of Ireland. It was some years later that this same David Sarnoff, in his capacity of traffic manager of the American Marconi Company, sent to the head of his company a memorandum that was destined to add to the utilitarian radio a new character—that of purveyor of entertainment and education. The enterprising Sarnoff requested an appropriation of $2,500 to enable him to design and build what he called "a radio music box," complete with loud-speaker, which would receive and transmit every variety of music—indeed, every variety of audible art—and which would sell at a profit to its makers for

no more than $75 per music box. Mr. Sarnoff's superior in the company turned down this very rational suggestion and intimated that the writer of the memorandum had let his imagination run away with his reasoning powers. However, the young man persisted, and a few years later succeeded in convincing his company of his sanity and realism. The result was the "radio" as we now know it, a cruder instrument perhaps than the elegant box that is familiar in our homes today, but one equally equipped to serve the art of music in all its many forms.

It is not to be supposed that the art of music was instantly served the moment the radio "music box" was put on the market. It seems that the early entertainment that seeped through the loud-speakers of those days was more akin to church-social musicales and amateur nights at home than to the professional entertainment of the concert and opera stage. But owing, perhaps, to Mr. Sarnoff's own predilection for good music, or to the eagerness of the new "music-box" public for better fare, the quality of the musical programs soon grew in seriousness and respectability, and presently noteworthy radio premieres succeeded one another with gratifying frequency. One heard symphony orchestras and other "long-haired ensembles" along with transmissions of jazz by hotel bands.

In his now famous memorandum, Mr. Sarnoff had proposed that the costs of the musical entertainment would be defrayed by the very ample profits from the sale of the new instrument. However, the advertising possibilities of radio entertainment soon became apparent and the sponsored program came into being and, with it, as an inevitable result, network broadcasting, which gave proper scope to national advertisers. Thus the American system of broadcasting sprang up as naturally and as effortlessly as did Venus in her fabled rise from the sea. Unlike Venus, the sponsored network show is not always beautiful and flawless; but it has the virtue of being truly American, as Venus was truly

Grecian, and there are indications that its remaining crudities will in time be toned down. When the sometimes offending commercial is prepared and served with a fine regard for the intelligence and taste of a public that voluntarily seeks out the highest form of musical art, the American system of broadcasting will indeed embody all the virtues now attributed to it.

As usual, it was the layman who greeted the advent of so-called "good music" with enthusiasm. The critics, of whom I happened to be one at the time, were conspicuous by their apathy. I remember the pilgrimage made by Mr. Merlin Aylesworth—then the President of the National Broadcasting Company—down to the offices of the *New York World* to interest its music critic, who was myself, in the achievements of his network in the realm of musical art. Very reluctantly I agreed to listen to a broadcast of *Faust,* out of Chicago, and to present my opinion of it in a Sunday column of the paper. Mr. Aylesworth sent down a special radio and I listened to *Faust* with patronizing good humor. It was a most beautiful broadcast, as I had presently to admit, and as I so courageously wrote in the *World,* that Sunday. But neither Mr. Aylesworth nor myself, I am certain, could then foresee the impressive future of radio music. I am obliged to confess that I considered my duty to the novelty fully discharged with my hearing of *Faust,* and not until some years later was I able to estimate the importance of the operatic broadcast from Chicago.

EXTENSION THROUGH NETWORK BROADCASTING

With the inauguration of network broadcasting by the National Broadcasting Company in November, 1926, great advancement in radio was made. The country at large began to hear symphony orchestras, operas, chamber music, as well as artists of the piano, the violin, and the voice. Network broadcasting implies an association of local radio stations which combine

for the purpose of sharing in programs conceived and transmitted from a key station, and by so doing share the costs and profits of a nationwide radio service. While network broadcasting made possible the commercial broadcasts of expensive and popular comedians, crooners, news analysts, movie and stage stars, it also permitted the luxury of noncommercial, or sustaining, broadcasts of good music and great musical ensembles. Our government, which allocates the air waves to private enterprise, does so on the condition that private radio enterprise serve the public interest, convenience, and necessity. And since culture, in its higher forms, is conceived as something definitely in the interest of the public, it was inevitable that the higher forms of music would be made available to the public. There were persons—many of them in the business of radio transmission—who took exception to the allocation of precious radio time to satisfy the musical desires of what was then a minority and, for that matter is a minority still, when compared with the huge public that espouses the art of Edgar Bergen, Bob Hope, and Jimmie Durante. No one could then guess how this minority would grow into numbers so vast as to make the appellation quite inadequate, and acceptable only when compared with the great multitudes who adhere to our most celebrated "gag" entertainers. But think how astonished Beethoven would be to learn that his symphonies are now heard simultaneously by millions in every civilized corner of the globe.

It may be of interest to students of music in radio to know that the Boston Symphony Orchestra first reached American radio listeners through a broadcast by the NBC in November, 1926. In that year the same company was privileged to offer the first broadcast of grand opera—the afore-mentioned performance in Chicago of *Faust*. Among subsequent "firsts" were the broadcasts, or rather the rebroadcasts, of symphonic concerts from Europe in 1929; of opera from Europe in 1935; of the first opera

written especially for radio (*The Willow Tree,* by Charles Wakefield Cadman) in 1932; the rebroadcast of musical programs from Russia in 1933; the broadcasts of regular series by school orchestras and choruses; the series of orchestral broadcasts designed for participation by members of the radio audience; the rebroadcast of the hitherto lost violin concerto by Robert Schumann from Berlin in 1934; the broadcasts of the New York Philharmonic-Symphony, the Boston, Philadelphia, and NBC symphony orchestras, and of a host of less-heralded but significant concerts over the air. On the purely educational side, in 1928 the company inaugurated the Damrosch hour for school children—first called the RCA Educational Hour and then changed to the NBC Musical Appreciation Hour. The value of network broadcasting as an educational factor received its highest demonstration in this series, which served as a course in musical appreciation for millions of school children throughout the nation. Of course, music appreciation can be and is taught in public and private schools; but only network broadcasting can commandeer one of the foremost musicians of our time as conductor and lecturer and one of the world's greatest symphony orchestras to provide the musical illustrations.

THE PROBLEM OF OPERA

Every invention has its limitations, and radio is no exception. The limitation of radio was and is the absence of sight —a defect that will be fully corrected in television. It was this limitation that stood in the way, for a time, of the broadcasting of an art form like opera. The argument was that the broadcasting of a complete opera would strain the receptiveness of music lovers accustomed to seeing as well as hearing their music dramas. There was also the very serious problem of the allocation of the three or four hours of radio time, as 180 minutes is a sizable slice of time out of a meager broadcasting day to devote

to opera, and the size of the nation's opera-loving public was at that time most uncertain. Opera in America was a different thing from opera in Germany or in Italy, where nearly every respectable city had its opera house and its enthusiastic and dependable public. We must grant that it took considerable courage on the part of the NBC to broadcast a full opera each week from the stage of the Metropolitan Opera House. However, the success of these broadcasts exceeded the most sanguine hopes of the company; for the limitation of radio in the matter of sight proved actually to be an asset. The fact was that those who were pessimistic about the appeal of nonvisual opera quite failed to take into account the power of imagination. Deprived of the visual stage, the listener to radio opera was obliged, perforce, to imagine the stage, and the stage of the imagination is not subject to the realistic limitations inherent in man-made *décors*. Sitting by his radio in his apartment or his farmhouse, the listener could conjure up for himself, as the music of *Aïda* came through the loud-speaker, such scenic glories of ancient Egypt as no opera house in the world could construct. He was not disturbed, as the subscriber to any opera house the world over often is, by disillusioning backdrops, flimsy scenery, and hazardous lighting. No longer did the visual impact of corpulent sopranos and paunchy tenors shatter the illusion of the beautiful music they sang. The Carmen that he heard on the air seemed to his *ear* the acme of feminine beguilement, the very woman of Bizet's score. The Isolde he heard pouring out her heart and dying on an exquisite F sharp was not the obese Wagnerian soprano of the stage, floundering awkwardly over the ungainly form of the equally obese Helden-tenor, but the lovely, willowy lady of his own and Wagner's imagination. Who ever said that opera was ridiculous? It certainly was not over the radio. Thus the virtue of radio's defect enchanted opera lovers, and brought to the radio box an ever-increasing number of those who had never "witnessed" an

opera. Soon the ratings began to count the national radio audience for the Metropolitan Opera House by the millions, and the emergence of a commercial sponsor was only a matter of time.

In the case of opera, radio definitely provided a play for the imagination of the listener, thereby adding to his enjoyment of what is often visually a disappointing experience. But you may well ask, "What about television? Won't the contrary be true? Will not television restore the opera house to the radio hearer and 'seer,' with all its imperfections and its disillusionment?" Well, on the surface it may. When *Aïda* is televised, your imagination will no longer be permitted to have full play. You will see on your television screen your hitherto admired singers, their mouths open wide, their faces contorted, striving for a high note. Yet there is hope. The movies have evolved a new type of romantic actor, aesthetic in form and supple in action. As you probably know, our television experts are even now hunting for our future television heroes and heroines and villains, both musical and dramatic. When they audition a singer, the question now is not only whether he or she has a good or beautiful voice. There is also the question whether these aspirants are photogenic. Good voices are uncommon, but even more uncommon is the combination of a good voice and a good figure. However, necessity is the mother of evolution. The imperative need of television for this combination of vocal ability and pulchritude will surely evolve a biological miracle. The tenor and the soprano of the future will be the very stuff of the composer's and the librettist's dream, as well as the delight of the purchaser of a television set.

RISE OF THE RADIO SYMPHONY ORCHESTRA

Returning to radio, let me say a word about the creation of one purely radio symphonic orchestra. Symphonic orchestras of any description are as expensive as yachts. Of this the directors of the nation's orchestras are painfully aware, at the end of each

season. Even a powerful radio network would ordinarily regard the acquisition of a symphony orchestra as a luxury not to be tackled without the collaboration of some national advertiser. The creation of the NBC Symphony Orchestra in 1936 was not, then, the indulgence on the part of the NBC of a desire to own its own symphony orchestra. On the contrary, it came indirectly as a response to our government's mandate to operate radio for the public interest, convenience, and necessity. In this case the motive was public necessity, at least the necessity of that part of the public which demands and expects to get the finest interpretations of the finest music over the radio. Obviously, the finest interpreter of music was and—may I say?—still is Arturo Toscanini; but in 1936 Maestro Toscanini had retired to his native Italy, presumably for good. I was sent to Italy to try to induce the illustrious maestro to return to America and broadcast some concerts for the NBC. My efforts met with no response until I held out the lure of a newly created radio orchestra, worthy in quality to be the instrument of so exacting a musician. To this suggestion Maestro Toscanini responded enthusiastically. It followed logically that so distinguished a performer should be provided with a proper instrument, and the NBC Symphony was, with much travail, created and made ready for Maestro Toscanini's return. The cost was considerable, but the public gratitude and response were commensurate with it. For five years orchestra and conductors were carried on a sustaining basis, and thereafter the broadcasts were commercially sponsored by the General Motors Corporation.

Aside from the exclusive acquisition of a Toscanini, a radio symphony orchestra has certain advantages over a concert orchestra that is only incidentally broadcast. The concert orchestra is subject to the desires and inclinations of its usually nonmusical board of directors, who guarantee its deficits and its continuance. The radio symphony orchestra is subject only to its

conductors and to the necessity of keeping musical faith with its vast, unseen public. While its programs may be less experimental than those of concert orchestras, since the great majority of people find their greatest spiritual sustenance in the classics, the divergence in the taste of radio listeners obliges the broadcasting of a fair proportion of modern and contemporary works. There is no box office to consider and, I may say, no extraneous influence of any nature to contend with. The sponsorship of the NBC Orchestra by the General Motors Corporation in no sense provides for any interference by that company in the program policy of the orchestra.

SUSTAINING AND SPONSORED PROGRAMS

There is a class of people that frowns on commercial sponsorship of the fine arts. This class, in all sincerity, looks upon the association of business and music as a misalliance, which is bound to have the most baneful influence on the development of the second partner. A careful appraisal of the results of this partnership to date must prove how groundless are such fears. Commercial sponsorship is at bottom the simplest of ideas. It is, in effect, making the public pay for whatever entertainment it desires. That is really what we mean by the American system of broadcasting. The sponsor endeavors to discover what the public wants to hear, and his gauge of the size of his audience is the volume of sales of his product. He knows that more people prefer swing to symphonies, so he endeavors to attract the interest of the larger audience for his product. He waited years for a reasonable popularity for classic music and, when he had assured himself of the existence of that popularity, he willingly assumed the cost of providing classic music to an audience whose size made it worth his while. When he realized that millions listened to opera over the air, he saw in these millions potential buyers of his products. So in the truest sense commercial sponsorship is

the ultimate test of popularity; and the growth and spread of good music in America is attested by the commercial sponsorship of the nation's opera and symphony orchestras.

Of course, we must not lose sight of the importance of the sustaining program. The sustaining program has the essential function of providing what one might call minority art and culture. It is the pioneer program and its operation is an essential condition of the American system. The music of the string quartet and chamber music in general are at present desired and appreciated by a minority of radio listeners; but since chamber music is held to be a lofty form of musical expression, the American radio is in duty bound to provide it for those who wish to hear it. When the public for chamber music grows to the proportions of symphony audiences, there can be little doubt that a sponsor will appear and relieve the radio chain of its obligation. In this manner, and under our American system, every taste is adequately served and no form of entertainment or culture is forced on the public. In this way radio remains a democratic purveyor of art and amusement, prospering only to the extent that it gives every section of the public what it desires.

The preoccupation of radio with the more popular brands of music needs no apology. Long familiarity with such compositions as are usually called the classics, if not special training, is needed to turn a musical novice into a lover of great music. The appreciation of popular music, on the other hand, requires no such preparation. Popular music is, in truth, folk music, in that it expresses simple emotions. The harmonies and the instrumentation of our popular music may be advanced and sophisticated, but the emotion is simple and basic.

There is no conflict and there never need be any between popular and classical music. Indeed, the truly cultivated person will not make any invidious comparison between the two. Of course, there are poor examples of popular music, as there are

poor examples of symphonic music. Indeed, a fairly good popular tune has more to offer than an inept symphony. Taken as a whole, popular music may be said to bear the same relation to art music that journalism does to literature. In any case, popular music will always be the solace and the delight of the greatest number of people, and its presentation over the radio calls for the most careful preparation. As far as performance goes, our fine swing bands now play with the precision and artistry of great symphonic orchestras, often with better rhythm and more flexibility.

Music in radio is an expensive commodity. Competition among rival stations and networks has tended to raise the standards of performance and presentation, in both the popular and the classical field. The celebrated bands that broadcast commercially have set up a mark for the house bands of the larger stations to shoot at. Under an FCC ruling, affiliated and independent stations are free to accept or reject sustaining network programs. As a consequence, these stations are now wooed with increasingly superior musical programs. In the classical field we now have the leading symphony orchestras on the air, and those of the public who enjoy these expect highly expert performances by the house orchestras of radio stations. The American Federation of Musicians, the American Guild of Musical Artists, and the American Federation of Radio Artists (AGMA and AFRA) have commanded wage rates for their radio members that are considerably higher than the wage scales for performers who do not broadcast. The American Society of Composers, Authors, and Publishers (ASCAP) and other organizations exact payment for composers. Further items of expense include experts in copyright and clearance of music rights, rentals of music, staffs of composers, arrangers and copyists, censorship of lyrics, a music and record library, a staff of librarians, conductors (both popular and "long-haired"), a contractor for musicians, "producers"

of musical shows, and someone to head the music department. It may even be that some other functionaries have been overlooked here. At any rate, a radio network's expenditures for music run into very large figures.

The simplest of musical broadcasts engages a host of collaborators. Contingencies must be foreseen and prepared for. The time element is important. For example, a half-hour musical show requires approximately twenty minutes of music, sometimes less, depending on the number of compositions to be performed. At the rehearsal, the engineer and the production director experiment with "mikes" and attempt to achieve a good balance in radio transmission. The continuity, or the talking part of the program, and the compositions themselves must be timed to the split second. If there is to be a studio audience, time must be allocated to applause. There are introductions, signing off, and, frequently, station "breaks" for identification. In script shows—that is, dramas or comedies—with musical backgrounds, the music must be tailored to fit the script, and at rehearsals the two elements must be carefully coordinated. It is a nice operation, and any slackness in preparation may destroy the intended value and effectiveness of the broadcast.

COMPOSITION OF WORKS EXPRESSLY FOR RADIO

Of course, it was natural that the nature of radio should exercise a profound effect on the form of the entertainment it dispenses. As regards music, the very limitations of radio have helped to evolve patterns that in turn have already had a marked influence on the character of compositions especially created for radio transmission. The limitation of time has enforced an economy of expression. The musical works that are now more and more frequently commissioned for the radio are strictly limited as to length. The composer must, of necessity, curb his usual expansiveness; and his exercise of musical economy results in a

lighter, simpler, more cohesive piece of music than the one that is intended for the concert hall. It is safe to say that no future symphony written expressly for radio will ever be more than fifty minutes long.

Perhaps the more revolutionary influence of radio will make itself felt in the field of opera. In fact, the radio opera may be said already to be a new and distinct opera form. The pattern was set in Gian Carlo Menotti's radio opera, *The Old Maid and the Thief,* commissioned by NBC in 1938 and presented in 1939. It flouts the accepted unities of visual opera by the use of sound effects and a narrator. It surmounts the cramping exigencies of time and place. In the course of an hour, *The Old Maid and the Thief* traversed more than a dozen different scenes. A more serious subject was aired in Montemezzi's one-act lyric drama *L'Incantesimo.* This poetic opera was in one scene and presumably could have been as appropriate for the stage as it was for radio; but only radio, which shuts out the sight of flesh-and-blood singing actors, could successfully transmit its mystical quality. Certainly the future radio opera will have the freedom of movement that the radio drama now has. It will be episodic and swiftly moving. Its subject matter will be unlimited. It will as easily encompass a century as it now does a day.

INFLUENCE OF RADIO ON MUSICAL CULTURE IN AMERICA

Looking back, it is hardly possible to exaggerate what radio has done for the musical culture of America—indeed, of the world. While many forms of art have benefited greatly through radio, music has enjoyed the greatest expansion. The reason for this is inherent in music itself. Of all the arts, it is the easiest to assimilate; of all the arts, it is the only one whose progress depends on familiarity and repetition; and radio is the ideal medium for familiarity and repetition. This is equally true of popular music and of so-called serious music. A hit tune may require

less repetition to make it familiar than does a symphony of Brahms, but "plugging" does the trick for both. And the "plugging" of good music on the radio in the last fifteen years has resulted in a general awareness of that art quite beyond the dreams of musical educators.

A good way to measure this advance in our country's musical culture through the instrumentality of radio is to contrast the number of music lovers who attend symphony concerts and recitals with the number who tune in on musical broadcasts over the air. To take New York City as an example, while the New York Philharmonic-Symphony Orchestra gives about 112 concerts during the season and the visiting Philadelphia and Boston orchestras give ten each, it must be remembered that all these concerts are played to small subscription audiences and that the actual number of listeners is only about 18,000 in a season. That is a very small number compared with the audiences that these orchestras attract for their broadcasts. Audience ratings for broadcasts cannot be so accurately calculated as can the box-office reports of Carnegie Hall. Still, these ratings are accepted as fairly comprehensive by the commercial sponsors of radio programs. According to these ratings, the New York Philharmonic-Symphony concerts should reach an audience of about eight million people and those of the NBC Symphony Orchestra between eight and nine million. A single Metropolitan Opera broadcast is heard by about eleven million, whereas an actual performance of opera at the Metropolitan is heard by only 3,000 persons. The difference is awe-inspiring, and shows what radio has done for musical culture in a comparatively short span of years. Where a few thousand people in different parts of the country listened to symphonic concerts fifteen or twenty years ago, many millions are listening today.

This enormous progress, as we have said before, has been duly noted and appraised by the sponsors of commercial prod-

ucts. When our national advertisers are willing to sponsor serious music, it can only mean that serious music has become a staple of the American public. For many years the Ford Motor Company sponsored a symphonic broadcast with the Detroit Orchestra and celebrated conductors and soloists. The Texas Oil Company is now in its second year of sponsoring the Metropolitan Opera House broadcasts, and the Bell Telephone Company offers millions of listeners each Monday night a half hour of the playing and singing of the country's top-notch musical artists.

Some of our commercial sponsors were at first timid in their appraisal of how much good music the buying public could "take." The Telephone Hour is an instance of the progress in program making that is taking place. Starting out at first with the most popular classics, the bits of good music that are known and loved everywhere, the Bell Telephone Company has now boldly advanced to scheduling movements of symphonies and concertos, and the response from listeners has been gratifying. The symphonic broadcasts of the New York Philharmonic-Symphony, the Boston Symphony, the Philadelphia Orchestra, and the NBC Symphony Orchestra make no compromise at all with the alleged popular fondness for musical tidbits.

Radio has brought chamber music to people who never suspected the existence of a string quartet. This form of music, formerly appreciated by only the musical "élite," is now heard in small-town homes and in farmhouses. The increased sale of chamber-music recordings as reported by phonograph companies can be accounted for only by the dissemination of this music through radio. The instrumental concert and the song recital are heard over all the networks with increasing regularity. The general picture is that of an extension of the musical fare of a metropolis like New York to every part of the United States.

Considering the past marvels of radio and its contribution to the music culture of America, there is every reason to believe

that the future will witness an equally impressive contribution to general musical appreciation. It is within the bounds of possibility that the schools and colleges of the country will depend more and more for their musical studies on our radio networks. Musical courses of the future will be taken via the radio, either in schools during the school period or at home as homework, with full credit given. Students will have the benefit of the most noted pedagogues, who will have at their disposal great orchestras and fine musical ensembles, as well as noted soloists, to illustrate their lectures. It is, indeed, an alluring prospect for the music student of tomorrow. Wherever he may be situated, his musical education will be entrusted to the most qualified experts in the field.

The major consideration of radio has been and will continue to be music. Those who are interested in studying the mechanism of broadcasting may in turn make a contribution to its unlimited future. Though much has been accomplished in the past, much still remains to be done. Standards of excellence must be not only upheld but improved. The commercialization of music over the air must never be allowed to affect the dignity of its presentation. The conjunction of science and intelligence must make this presentation worthy of the exalted music entrusted to us by great composers of the past and the present. New music must be sought out and presented for the judgment of the radio public, since it is the public that rejects it or makes it immortal. Above all, one must bear in mind that the transmission of music over the air is a many-sided operation, depending not alone on the musician who plays or sings, the conductor, the musical commentator, the writer of continuity, the engineer at the controls, and the producer with his blue pencil and his stop watch—but on all of them together. It is in the truest sense a combined operation.

Building the Musical Program

BY ERNEST LA PRADE

RADIO programs, like houses, are first planned, then built. Being planned, as a rule, in series, they may be compared to the units in a modern housing development where, although each individual structure has a distinctive character of its own, it nevertheless harmonizes with the rest and contributes to the unity of the project as a whole.

Program plans originate in various ways. Many commercial programs are planned by their sponsors, by advertising agencies, or by free-lance specialists in the field. Sustaining programs—those presented by radio stations or networks at their own expense—may be conceived by staff members of the broadcasting organization, submitted by an outside organization or individual, or suggested by listeners. Whatever their origin, they must be passed upon by a program-planning board, a group appointed by the management to supervise the general program structure of the company, maintain program standards and policies, preserve a balanced schedule, evaluate new program ideas and talent, and create or discover program plans to fit specific needs. Having agreed upon the acceptability of a program plan and having ascertained that suitable time is available for its presentation, the board recommends it to the management, which either approves or rejects it. If it is approved, the plan is then turned over to the person or persons assigned to building the programs.

The building of musical programs is often done by groups rather than by individuals. The reason for this is fairly obvious, in view of the multiplicity of talents and skills that the task demands. It calls, first of all, for intelligence, imagination, and that indefinable quality called taste, a combination of attributes essential in evaluating program material and talent or in devising new forms and methods of presentation. It calls also for familiarity with the policies, personnel, routine, and facilities of the broadcasting organization; for knowledge of the tastes and listening habits of the audience, insofar as they are ascertainable; for knowledge of what has already been done on the air along similar lines; for acquaintance with sources of music of all kinds, suitable arrangements, and talent. Above all, the building of musical programs requires musicianship and a broad knowledge of the literature in whatever field—serious or popular, symphonic or operatic—is to be explored.

REQUIREMENTS OF DIFFERENT KINDS OF PROGRAM

The kind and degree of musicianship needed depends, of course, on the kind of program to be built. A program of familiar light music poses one set of problems, popular dance music another, symphonic music yet another. Whatever form the problems take, the appropriate type of musical knowledge, training, and experience must be available to solve them. The builder of a musical program should be, and usually is, a professional musician. Frequently he is the conductor or musical director of the program; but if, for any reason, the task is assigned to a nonmusician or to a musician not fully equipped to cope with all of its technical difficulties, he will have to seek expert guidance in matters such as the following:

Selection of unfamiliar material. In building most types of program it is often necessary to consider music unfamiliar to the program builder, music that he has never heard and will

have no opportunity to hear before deciding whether or not to use it. In order to judge its intrinsic musical value and determine its style, mood, and suitability to his specific requirements, the program builder must be able to read the score; that is, he must be able to form an accurate mental concept of the sounds represented by printed or written notes. Unless he can do this, he will be in the position of having to accept new music on faith.

Instrumentation. It sometimes happens, particularly where serious music is concerned, that a composition important to the scheme of a given program calls for instruments that are not included in the orchestra assigned. In many cases it is possible, without detriment to the musical results, to "cue" the missing parts into those of available instruments; but this can be determined only by one whose musical knowledge and experience qualify him to judge the effect of such changes in the original scoring.

Timing. The importance of the time factor in broadcasting makes it necessary for the program builder to know the approximate duration of any piece of music that he contemplates using. There are various ways of acquiring that information—some of them simple, others more complicated. Published timings exist of some of the standard symphonic works, but these seldom include such vital data as the tempo at which the work was played, whether repeats were omitted, or even what was the timing of separate movements. The timing of works that have had previous performances over the same station or network can usually be found either in the scores or in the records of the production division; but these, too, are often of doubtful value for the same reasons. Generally it is preferable and, where new music is concerned, it is essential for the program builder to make his own timing estimates. This he can do in some cases by a simple mathematical process. If metronomic tempo indications are given, the duration of a piece can be determined by counting

the number of measures it contains, multiplying by the number of beats in each measure, and dividing by the metronomic index. The result will be the playing time expressed in minutes. If no metronome marks are given, it becomes necessary to read the piece through, inferring the correct tempi from the internal evidence of the score and timing the reading with a stop watch—a procedure that obviously demands a high degree of skill in score reading. Similarly, the cutting of long works, so often necessary in broadcast programs, can be done only by a competent score reader.

FUNCTIONS OF THE RADIO PROGRAM

The objective of a radio program is threefold: to attract an audience, to hold its attention, and to leave it satisfied. The first phase—attracting listeners to a new program or new listeners to an established one—is primarily the business of the promotion department, which publicizes the offerings of the program department through the media of radio, press, mailing lists, etc. However, the program builder can greatly facilitate these promotional activities (1) by selecting a good program title—one that is intriguing, easy to remember, and brief enough to fit readily into published program listings; (2) by keeping the promotion department supplied with advance information about forthcoming broadcasts.

Once the audience has been induced to tune in, the responsibility for holding it rests heavily on the program builder. In approaching his task, he is guided by certain practical considerations, certain aesthetic principles, his own experience and ingenuity—and virtually no rules, for successful programs have been built in almost every conceivable way out of every imaginable kind and combination of materials.

The first consideration is the specific function of the program as a component of the over-all schedule, since that factor will

determine the general character of the program and influence the attitude and procedure of the builder. Programs are usually scheduled for one of the following purposes:

To provide a desired type of entertainment, instruction, or information. In such cases the program content is of primary importance. Therefore, the material is selected first, and the talent and the program "format," or manner of presentation, are chosen to fit it.

To appeal to the presumed mood of the audience at a given hour of the day. Here the style and format of the program take precedence. For a cocktail-hour program both music and talent will be selected on the basis of their appropriateness to a bright and sophisticated type of presentation; for the dinner hour the object will be to achieve a suave and unobtrusive presentation; for a late evening "slumber hour" the aim will be to establish an atmosphere of tranquility and relaxation.

To exploit featured talent. In programs of this kind, the musical numbers will be chosen for their fitness as vehicles for the talent in question, and the format will be designed expressly to afford an effective setting for it.

To preserve a balanced schedule. The choice of material, format, and talent will be guided by the desire for contrast with the programs that precede and follow.

To meet competition. In this instance, the program-building procedure will be influenced by the character of the rival program or programs.

Having determined the purpose that his program is intended to serve, the builder's next step is to ascertain what means will be at his disposal: what kind of orchestra will be available; what vocal talent; how much rehearsal time; what studio facilities; what sums for music, arrangements, and performance rights. When these questions have been answered, he is ready to proceed with the actual construction of the program.

PRINCIPLES AND PROCESS OF PROGRAM BUILDING

As has been indicated above, there are few if any rules of program building. Almost any elements, however unpromising or seemingly incompatible, can be combined to form an acceptable presentation, given sufficient skill and ingenuity on the part of the program builder. There is, however, one cardinal principle that applies to program building as it does to musical composition—and, indeed, to all the arts—the principle of unity plus variety.

The composer of any extended musical work seeks, first, to engage the listener's interest with the freshness and charm of his thematic material; then he tries to keep that interest alive and stimulated by the variety with which the themes are developed. He modulates from key to key, contrasts one mode with another, introduces changes of tempo, rhythm, dynamics, and scoring; but all this he does within certain limits. In his quest for novelty he is careful not to stray too far afield, for he knows that variety without unity may lead to confusion. Therefore, throughout the development and variation of his themes, he preserves their essential character; and in the end he restores them to their original form and leads them "home" to the key in which the piece began, thus conveying to the listener a sense of logical fulfillment —in other words, a sense of *unity*.

Selection of materials. The composer is, in fact, a program builder. When Beethoven wrote his Ninth Symphony he built an hour-long program packed with musical interest, drama, poetry, humor, and pathos; a program containing all the elements needed to provide a complete, varied, and satisfying aesthetic experience. As this is precisely what the program builder seeks to accomplish, it follows that the program builder is, in a limited sense, a composer. He does not, of course, create his own raw materials, as did Beethoven; but in combining the materials

that he has selected he faces similar problems and is guided by the same artistic principles.

There are numerous ways of ensuring variety in a program. Instrumental music may be contrasted with vocal music, lively movements with quiet ones, old works with modern ones. The styles of different periods, different schools, different nationalities afford great variety; and so do the several musical forms, such as the symphony, the overture, the symphonic poem, the cantata, the minuet, the waltz—to mention only a few. These, however, are merely the broader and more obvious sources of contrast. A program may consist exclusively of music of a single period, a single school, a single composer, or even a single form, and yet contain ample variety of mood, tempo, rhythm, key, or instrumentation. One-composer programs are no novelty, and usually they avoid monotony. So do programs of popular dance music. It is quite possible to build an effective program consisting entirely of tangos, provided that the successive numbers afford variety of key, mode, or style of arrangement.

Variety becomes more difficult to attain as the choice of material is narrowed, but normally it presents no great problems. Unity, on the other hand, is always elusive. It is a more subtle quality, hard to define and often hard to achieve; this may account for the fact that it is so often lacking in programs heard both on and off the air. In trying to determine what constitutes unity in a program, it may be helpful to consider the question again from the standpoint of the composer. In the first place, any composer's works are likely to possess a natural homogeneity of style which derives from his personal treatment of melody, harmony, rhythm, and orchestration; but, apart from that, he utilizes the conventional musical forms to provide symmetrical frameworks for his tonal structures. One of the simplest of these is the so-called three-part, or "A-B-A" form, consisting of the "exposition" of a musical idea, or theme, followed by a new and

contrasting idea or "development," with, finally, a return to the original idea ("recapitulation"). In compositions built on this model, the second part obviously provides variety and the third part unity. The aesthetic value of the form is attested by the fact that most of the music written during the past two centuries has been based upon it or upon variants of it, such as sonata form and rondo form.

There are other unifying influences of which the composer may avail himself, such as key relationships, recurrent themes, or "programs"—that is, stories that the music is supposed to relate or suggest or illustrate, or scenes that it purports to describe. All these devices help to bind the work together, to give it cohesion and meaning; but even where they are employed, the A-B-A formula is seldom discarded, for experience shows that a return from the unfamiliar to the familiar provides an unfailing method of satisfying the listener's instinctive demand for unity.

In radio programs, musical "signatures" are generally used for the dual purpose of identifying the program and facilitating its timing, but they also serve as elements of unity, since repetition at the end of the program of music heard at the beginning has somewhat the effect of thematic recapitulation. The mere use of a signature, however, is hardly sufficient to unify a fundamentally haphazard program scheme. A well-constructed program has symmetry and order. There is purpose in its design and relationship between its parts. It proceeds, as it were, from a reasonable premise to a logical conclusion, and as one period succeeds another the listener is moved to remark, not only "How refreshing!" but also "How apt!"

The kind of unity a program may have depends partly on the nature of the program. In a symphony concert there may be no stronger connecting link than the fact that all the numbers belong in the category of serious music, but greater unity is achieved by devoting the program to a particular class of music

—for example, to works of a single period, school, or composer. Many radio programs, particularly those of the educational or "cultural" type, derive unity from subjects on which they are based, such as Folkways in Music, Our Contemporary Composers, etc. Some resort to the time-worn device of the musical travelogue, and others restrict their selections to one kind of music, specializing in musical comedy, old favorites, Latin American music or the latest hits from Tin Pan Alley. A few seem to dispense with unity entirely and to be none the worse for it —but that is open to question. The value of unity naturally varies with different types of program. It is more important in an educational broadcast than in a variety show. Nevertheless, there is probably no program, however casual or frivolous in purpose, that would not be more effective if it had greater consistency and continuity.

Arrangement of presentation of materials. Program building involves not only the selection of materials but also their "routining": the arrangement of the order of their presentation. Here again, rules are lacking and the builder must rely upon his own taste, judgment, and understanding of aesthetic principles. In programs designed solely to entertain and consisting of miscellaneous items, it is customary to begin with a brilliant and impressive piece calculated to fix the listener's attention and put him into a cheerfully receptive state of mind. However, there may be excellent reasons for beginning with an entirely different kind of music. Many programs follow some kind of chronological scheme, in which case the opening number would probably be the earliest composition included in the list. Other programs may lend themselves to a plan of presentation that begins quietly and unpretentiously and works up gradually to a climax.

The ending is equally variable. Ordinarily the final number is a rousing piece, but there are occasions when it is more effective to end the program quietly. As for the intermediate num-

bers, there is absolutely no fixed pattern to which they must conform. If a novelty is included, it is usually advisable, though by no means mandatory, to place it in the middle of the program, reserving a familiar piece to serve as a unifying factor toward the end. Solos are usually preceded and followed by orchestral numbers, but in programs built around star talent it may be preferable to present the featured artist at the beginning and the end, with orchestral numbers in between, to furnish variety—and a chance for the soloist to rest.

An important detail of program building is providing for "leeway" in the timing. Even after the most careful rehearsal, programs have a way of changing pace when they go on the air. Ordinarily, the closing signature is sufficiently elastic to take care of such discrepancies, but certain types of program—notably, those involving pickups from remote points—should be equipped with buffers, a buffer being a number that is not vital to the program scheme, and one that may be varied in length by means of repeats or cuts or omitted entirely, as occasion demands.

The music sheet. When a program is finally completed, the builder prepares a "music sheet" listing the selections in order of performance and including certain information required by the various departments and individuals who will have a part in the preparation or presentation of the broadcast. The music sheet must contain the following data:

1. Title of program.
2. Day and date of broadcast.
3. Time of broadcast.
4. Station or network carrying program.
5. Title, composer, and copyright owner of each composition. (Familiar music of unknown origin may be listed as traditional, and instead of the usual designation of copyright ownership the letters "PD" may be inserted, indicating that the piece is in the public domain. However, if a

copyright arrangement of a public-domain number is used, the owner of that copyright must be listed.)

6. Names of all talent, including conductor, if any, soloists, and "name" groups. (Staff organizations are listed by type, as Symphony Orchestra, Concert Orchestra, Dance Orchestra, Mixed Chorus, etc.)
7. If any composition is to be performed in other than its original form, the arrangement to be used must be specified.
8. In the case of vocal numbers, the key to be used must be specified.

In addition to the above information, it is advisable to include the number of the program if it is one of a series, and its subtitle if it has one. It is also advisable to indicate in the right-hand margin the estimated timing of each number.

The specimen music sheet below shows the form usually employed for NBC programs.

MUSIC OF THE NEW WORLD

Thursday, February 1, 1945

Weaf & Net.

11: 30–12: 00 Mid.

16. Caribbean Cities

From NBC-NY:

Signature: Finale from "New World" Symphony, Dvorák (Simrock) : 40

Orchestra

1. En el Templo de Yocari (Ciudad Trujillo) 3: 00
E. Mejía Arredondo (Alpha)
Orchestra

From San Juan, Puerto Rico:

2. (*a*) No Me Toques Juan Morel Campos (Otero-PD)

(*b*) Los Carreteros — Rafael Hernández (Peer)
(*c*) Ritmo Ardiente — Augusto A. Rodríguez (MS-PL)*
University of Puerto Rico Chorus

From NBC-NY:

3. (*a*) Baptism of the Drums (Port-Au-Prince) — 2: 50
De Paret (MS-PL)
(*b*) Danse de la Mambo (Port-Au-Prince) — 2: 30
Justin Elie (MS-PL)
Orchestra

4. Biguine (St. Pierre) Jerome Moross (ACA-BMI) — 4: 30

23: 30

Henri Nosco, conductor
Symphony orchestra
University of Puerto Rico Chorus
Augusto A. Rodríguez, director

Upon completion of the music sheet, it is forwarded to a program contact, who submits it first to the duplication desk. There it is checked for duplication of numbers on other programs scheduled for the preceding or following periods. It then goes to the music rights desk, where each musical item is checked by a copyright expert to determine whether a license is required for its performance and, if so, whether the license is held by the broadcaster or can be obtained. If a proper license for any number is unavailable, music rights deletes the number and so advises the program builder, who must then submit a substitute number. When the entire program has been approved by music rights, copies of the music sheet are made by clerks in the music division and routed to the production, script, and announcing divisions, and to others concerned with the musical details of the broadcast.

It is not usually necessary for the program builder to be a copyright specialist. If the copyright information required for

*Manuscript—private license.

the music sheet is not conveyed by the music itself, the program builder can obtain it either from the music library or from the music rights desk. Nevertheless, he will find a general knowledge of copyright provisions extremely helpful. He will avoid much waste of time and effort if, for example, he knows what licenses are held by the organization for which he works, what types of music are basically in the public domain, and whether a given work is likely to involve a performance or rental fee. Such knowledge is not widespread and the chances are that most program builders will have to acquire it gradually as a by-product of their general experience. They will do well to recognize its value at the outset and concentrate on acquiring it as rapidly as possible.

SOURCES OF MUSIC MATERIALS

The program builder will also find it profitable to know where to look for music materials. His company may employ a purchasing agent whose duty it is to locate and acquire, by purchase, loan, or rental, any music not already available in the music library; but, here again, time and labor may be saved if the program builder is acquainted with the sources from which music of various types may be obtained. These sources may be divided into three categories: *viz.*, publishers, rental libraries, and public libraries. Among the leading publishers of works for symphony orchestra are the following:

G. Schirmer, Inc., New York.
Carl Fischer, Inc., New York.
J. Fischer & Bro., New York.
Associated Music Publishers, Inc., New York.
G. Ricordi & Co., New York.
H. W. Gray Co., New York.
Boosey-Hawkes-Belwin, Inc., New York.
C. C. Birchard & Co., Boston.
Elkan-Vogel Co., Philadelphia.

The following publishers have more or less extensive catalogues of arrangements for concert orchestra, band, and smaller instrumental combinations:

Carl Fischer, Inc., New York.
G. Schirmer, Inc., New York.
Broadcast Music, Inc., New York.
Boosey-Hawkes-Belwin, Inc., New York.
Theo. Presser Co., Philadelphia. (Also controls catalogues of Oliver Ditson Co. and John Church Co.)

Publishers of choral music include the following:

G. Schirmer, Inc., New York.
J. Fischer & Bro., New York.
Carl Fischer, Inc., New York.
H. W. Gray Co., New York.
Arthur P. Schmidt Co., Boston.
C. C. Birchard & Co., Boston.
Hall & McCreery Co., Chicago.

Orchestrations of popular songs and of dance music are obtainable from their respective publishers.

The principal rental libraries in New York are the Mapleson Music Library, which specializes in operatic materials, and the Tams-Witmark Music Library, which supplies scores and parts of operas, operettas, and oratorios, as well as some standard symphonic music.

Music not obtainable from the publishers or rental libraries because of its age or rarity can often be found in the music division of the Library of Congress, the music division of the New York Public Library, or the Edwin A. Fleisher Music Collection in the Free Library of Philadelphia. The Library of Congress and the New York Public Library are prepared to furnish at moderate cost photostatic copies of music in their archives. The

Fleisher Collection, which contains a large number of unpublished works by contemporary American and Latin American composers, will lend them without charge if authorized to do so by the composers. The music division of the Pan American Union also has a quantity of Latin American music that may be loaned to responsible borrowers. None of these agencies, however, controls performance rights in the works it holds. When a protected composition is obtained from any of them, the user must negotiate with the composer or the composer's agent for permission to perform it.

SELECTION OF TALENT

The selection of talent is a phase of program building that varies in difficulty according to the nature of the program and also according to its locale. In the major amusement centers, such as New York, Chicago, and Hollywood, there is an ample supply of singers and instrumentalists experienced in the performance of music of the usual kinds; unless the program builder is a newcomer to the community, he will probably be personally acquainted with many such artists. If, however, he happens to need the services of some rare or exotic type of performer—a player of the lute or virginals, for example, or a singer of gaucho songs—he may have trouble in finding what he wants, even in the principal talent reservoirs. Elsewhere such talent is likely to be nonexistent, and in the smaller cities it may be hard to find competent artists of any kind. In the large amusement centers, information concerning available talent may often be obtained from sources such as the following:

Concert managers, talent bureaus, and booking agencies (for vocal or instrumental soloists, groups, "name" bands, etc.).
Local musicians union (for orchestral musicians).
American Federation of Radio Artists (for singers and actors).

Musical organizations, such as symphony orchestras, choruses, opera companies, and chamber-music societies.
Music schools and music departments of colleges.
Public-school music departments.
Government agencies, such as the Office of Inter-American Affairs (for Latin American and other exotic talent).
Other talent.
Other broadcasters.
Music publishers.

Talent sources are naturally more limited in smaller places, but there is sure to be a local of the American Federation of Musicians, from which orchestral players may be obtained, and soloists may be found among local music teachers, in public school or college music departments, and in church choirs.

RECORDED MUSIC

Thus far we have been concerned exclusively with "live" talent programs, but no discussion of program building would be complete without some mention of recorded music. It is not used by the major networks, but individual stations employ it extensively in local broadcasts. Generally speaking, recorded programs involve fewer problems for the builder than do live ones. Each item comes ready-made, complete with talent. The character of the music, quality of the performance, and exact timing can be determined easily without resort to score reading, and no arranging or cueing is required. However, the aesthetic principles referred to above are equally applicable to recorded programs, and there is an additional factor that calls for careful consideration by the program builder—namely, the quality of the recording. Many compositions, both serious and popular, are available in more than one recording, and the various recordings may differ widely in technical or artistic quality or in both. The surface noise level is higher in some than in others, and even the

best records may become worn or scratched. The program builder should check the quality of any record that he proposes to schedule for broadcasting; and he should also bear in mind that recorded music is fully protected by copyright. The possession of a phonograph record does not carry the right of performance for profit; consequently, recorded music programs must be cleared through music rights in the same manner as other programs, except that in preparing the music sheet it is customary to list the make and number of the record instead of the copyright owner.

The repertory of recorded music is extensive, though not all-inclusive. Virtually every type of music is represented by at least a few examples, and if a particular item proves to be unobtainable on records an acceptable substitute can usually be found. In recent years the recorded repertory has been augmented by a large and rapidly growing body of material in the form of electrical transcriptions made expressly for broadcasting. These are usually furnished on sixteen-inch disks for reproduction at a turntable speed of 33⅓ r.p.m. (commercial records, intended primarily for home use, are reproduced at 78 r.p.m.). Several manufacturers of electrical transcriptions have library services, available to radio stations only, which contain a wide variety of music, both serious and popular.

For information pertaining to recorded and transcribed music the program builder should provide himself with the following catalogues and guides:

Commercial recordings, catalogues:

RCA Victor Co., Inc., Camden, N. J.
Columbia Recording Corp., New York.
Decca Records, Inc., New York.
The Gramophone Shop, Inc., New York.

Commercial recordings, guides:

The Record Book, by David Hall (Smith & Durrell, New York).

A Guide to Recorded Music, by Irving Kolodin (Doubleday, Doran & Company, Inc., New York).

The Gramophone Shop Encyclopedia of Recorded Music, edited by George Leslie Clark (Simon and Schuster, Inc., New York).

Transcription libraries, catalogues:

NBC Thesaurus (NBC Radio-recording Div., National Broadcasting Company, Inc., New York).

Associated Program Service (Associated Music Publishers, Inc., New York).

Standard Program Library (Standard Radio, New York).

World Program Service (World Broadcasting System, Inc., New York).

Lang-Worth Feature Programs, Inc., New York.

C. P. MacGregor, Los Angeles.

Production of Musical Programs

BY EDWIN L. DUNHAM

SHOULD the person who directs the production of a radio program be called a producer or a director? Both terms are used in broadcasting circles. Perhaps an analogy with motion-picture practice may help to settle this matter of terminology. A film producer, according to the dictionary, is "one who finances or is in general charge of the production of motion pictures." Well, whatever the production man does in radio, he certainly doesn't finance the show! Let us see what the dictionary has to say about a director. "A director is a producer of a play who trains the actors and combines for his desired ends acting, business, scenery, lights, etc." Although it appears from this definition that a director is simply a producer-in-action, the essential point is that the director is charged with the responsibility of disposing and coordinating all factors of the performance in such a manner that the desired result will be achieved. We might appropriately call the person who fulfills this function in radio a "production director." However, it is shorter and equally correct to call him simply a "director," as we shall do in this chapter.

In radio, a director often takes on more responsibility than is indicated in the definition given above. He frequently is called on to build an entire show, especially if it is a musical program. He may, for example, be handed the assignment of building a half-hour musical program, starting from scratch and using en-

tirely his own ideas. His first task will then be to think up an interesting program. Having done this, he will find out if the music he wishes to perform is available in the station's music library, or if it can be obtained elsewhere. He then contacts the orchestra department to see if he can get an orchestra of the size he needs for this particular broadcast. Next, he talks to a member of the script department, a staff writer who has been assigned to write the continuity for this program, and outlines the kind of continuity that he has in mind. From the studio-assignments department he ascertains what studios will be available and takes the best one he can get. His next job is to select whatever solo talent —vocal or instrumental—he needs for the show. Having disposed of all these preliminaries, he will then supervise the rehearsals and see the program through until it is off the air. This is typical procedure in the case where a director is required to make a complete follow-through from program idea to final broadcast.

It is not possible to lay down blanket rules regarding the duties and responsibilities of a director in producing musical programs, because the circumstances under which such programs are planned and produced vary greatly. In some cases the director not only carries out all the functions mentioned above, but in addition he may even write his own continuity. At the other extreme, he may simply be called on to direct the broadcast of a program that has been prepared by other members of the staff. In a large organization such as the National Broadcasting Company, program functions are generally divided among several departments and various individuals. The idea for a sustaining musical program, for instance, may originate with the public service department. In some cases, the program may be built by a member of the music division, who may also have charge of hiring the special musical talent and obtaining the necessary musicians through the Director of Orchestra Per-

sonnel. In other cases it is the conductor who does the program building and selects the soloists. Whatever variation there may be in the responsibility assumed by the director in these preliminary stages, his responsibility is invariable and clearly defined when it comes to rehearsals and performance on the air. He then assumes full control, and takes on both authority and responsibility.

As regards both authority and responsibility, the director of a musical program is in a somewhat special position, compared with the director of a dramatic show. The latter is in *direct* contact with his actors. He is, in a sense, their conductor, controlling by signs and gestures the pace, the dynamics, and the coordination of their speech and their movements. But in a musical program there are really two directors: the production director and the musical director or conductor. The production director must convey his instructions to the orchestra through the musical director. If he thinks the trombones are too loud or the oboes are too soft, he tells the conductor, and the latter—if he is cooperative—will make the necessary dynamic adjustments. How far can a director go in attempting to impose his own conceptions of tempi and dynamics in the interpretation of a musical score? It seems to me that this is where the human equation enters in. In other words, it depends a lot on the personalities of the individuals involved. In general, one should be able to rely on the judgment of a good conductor, and also make allowances for inevitable differences of taste in details of musical interpretation. It may happen, however, that the program includes unfamiliar music or music involving certain historical factors affecting its performance of which the production director has special knowledge. In that case his suggestions are fully justified and will no doubt be welcomed by the conductor—always assuming that no clashes of personality have arisen to hinder cordial cooperation. When such clashes occur, it is time to get a new team.

One thing is certain: such control as the production director intends to exercise over the performance of the music must be exercised during rehearsal, for it will be too late during the broadcast, especially in programs of "serious" music. The dramatic director can give his actors the signal to hurry up if the show is running overtime. But the director of a musical broadcast cannot well signal the conductor to hurry up in the middle of a performance of Mozart's *Jupiter Symphony*—at least, not without violating artistic integrity. When a conductor takes Beethoven's *Eroica Symphony* two minutes slower than he was expected to, that is not the production director's fault, though he is left holding the bag. This is merely to indicate some of the special problems that a director of musical broadcasts has to face. And now it would be wise to consider what qualifications he should bring to so exacting a job.

QUALIFICATIONS OF A DIRECTOR

A good education and a thorough knowledge of broadcasting will be taken for granted in anyone who aspires to be a radio director. The person who is to direct the production of musical broadcasts must in addition have a comprehensive knowledge of music. He should, in a word, be a musician. Ability to sing or play an instrument is not so important as ability to read a score. The latter accomplishment is, in fact, indispensable. Even if he cannot read and "hear" an orchestral score in all its details, as a conductor does, the director should be able to follow the general outlines of the score with sufficient intelligence to know what is going to happen at any particular moment. He can then tip off the engineer when a sudden increase of volume is expected, when soloists or chorus are about to enter, or when any particular combination of instruments calls for special attention on the dials. A nodding acquaintance with all the instruments of the orchestra is more important than skill in playing any one of

them. The director should know all the instruments by their names, their sounds, and their appearance. He should know the different sections, or "choirs," into which the symphony orchestra is divided. He should be familiar with the customary seating arrangements for an orchestra, and should know something about special seating arrangements tried out by various conductors. Years ago, on many musical programs, the musicians used to come into the studio, sit wherever there was a chair, and remain there throughout the broadcast. Those carefree times are gone forever. Today the director is expected to know where the musicians should sit, and to see that they go to the right seats.

Of course, there are all kinds of musical programs, and an acquaintance with symphonic literature is not essential for the director of a hit-tune show. Some broadcasting companies follow a system of specialization in assigning directors, reserving some for "serious" musical programs and others for popular and variety shows. The more you know about all types of music, the more valuable your services will be—and the more enjoyment you will probably get out of your work. Overspecialization may lead to a needlessly narrow outlook on music. The superhighbrow who thinks only in terms of the three B's is matched at the other extreme by the jazz fan who thinks only in terms of "hot licks." The director should continually seek to widen his acquaintance with music in all directions, both in the past and in the present. He should have thoroughly digested several authoritative histories of music (since historians often disagree, it is well to get various points of view), but he should not consider this a satisfactory substitute for a keen curiosity about the music of his own day.

A good ear, a fine critical sense, and well-developed musical judgment will be valuable assets to the director of musical programs. Not only will these qualities be valuable in directing broadcasts, but they will also stand him in good stead when he

is called on to audition new talent, as he frequently may be. In the course of listening to many auditions, a director may occasionally experience the thrill of discovering an unknown singer or some other performer who has genuine talent. In that case he should lose no time in following through by seeing to it that the artist in question is heard by the proper officials of his organization.

Judgment is a "must" in the director's list of qualifications. He is continually coming up against situations that require the prompt exercise of judgment, such as the following: A program is found to be too long by several minutes, and a musical number has to be deleted. Which number, in his estimation, can best be spared? During rehearsal, it may appear that a certain musical arrangement does not come up to expectations. If the director decides that it is not suitable, he should, after consulting the conductor (and the soloist, if any), have another arrangement or another number substituted.

On the technical side, the director should know something about acoustics—*i.e.*, the science of sounds. He should be familiar with the basic elements of radio engineering, including the functions of a microphone, the relative usefulness of unidirectional and bidirectional "mikes," and the operation of "faders" (microphone controls) in the control room.

A thorough knowledge of his company's general policy is absolutely necessary for the director and will often be of help to him in making difficult decisions.

REHEARSING AND PRODUCING THE PROGRAM

If the music to be performed is unusually difficult, or if groups requiring special coaching are involved, it may be necessary to hold piano rehearsals a day or two in advance. In any case, the director must supervise the rehearsal of all the musical forces participating in the program two, three, or four hours before

going on the air. Rehearsals cost money—hence, he takes as much rehearsal time as his budget will allow, and he makes every minute count. During rehearsal the director, working together with the conductor and the engineer, has to control the "balance" of the orchestra. The orchestra may sound all right to the conductor out in the studio, but inside the control room—where the director hears the music through a loud-speaker, as it will be heard over the air—one section of the orchestra may sound too loud or too soft in relation to the other sections. It is the director's responsibility to have the orchestra properly balanced at all times. He must see, besides, that the soloist or the chorus, if there is one, is correctly balanced with the orchestra. In all that he does, the director should bear in mind that broadcast programs, unlike theatrical performances, cannot be improved through repetition. Every program that goes on the air is both a first and a last performance; hence, immediate and absolute perfection must be the goal.

Let us assume that you are directing a program that goes on the air at nine in the evening, and that you have been given three hours for rehearsal. An announcer, an engineer, and a conductor have been assigned to the show. You arrive at the studio fifteen minutes before rehearsal time and supervise the placing of the chairs and the music stands for the orchestra. When the engineer arrives, you discuss with him the placement of the microphone ("mike," in radio parlance), or microphones, if more than one is needed. The librarian comes in with the music and you designate where the books shall be placed. At six o'clock the musicians arrive, taking the places that are indicated for them by the distribution of the music folios, and the rehearsal starts.

While you are timing each number, you are listening for balance, judging the adaptability of the song to the singer, weighing the importance of each number in the program, and gauging

the correctness of the tempi, etc. After all the numbers have been rehearsed and the total time has been checked, you call for a dress rehearsal. For this, of course, you will need the announcer —who has been previously told at what time he would be expected to appear. Usually you time the continuity, or spoken part of the program, before the rehearsal begins, by reading it out loud to yourself with stop watch in hand. A stop watch, by the way, is the director's inseparable companion: it is like a badge of office, and a director without a stop watch is as helpless as a lame man without crutches.

The dress rehearsal gives the director his real chance to size up the show and to make last-minute improvements. His critical ear will be alert to detect every possible fault. He will listen carefully to the manner in which the announcer reads the continuity. He will make final adjustments in the orchestral balance. He will, no doubt, wish to consult the engineer and to profit by the latter's advice, for though engineers are not always trained musicians, they have had a lot of experience in musical broadcasting and, if they really take an interest in the show, their suggestions may be very helpful.

The director should caution both the vocalists and the conductor that the dress rehearsal is partly for balance but more particularly for timing. Timing is the all-important factor in making sure that the broadcast will go smoothly and get off the air without either a mad scramble or an awkward pause at the end. Of course, the director can never be certain that the timings he gets in rehearsal will be strictly adhered to in the broadcast. Musicians are only human. A singer may "romp" through his or her numbers in rehearsal, and sing them more slowly and with more expression during the broadcast—which naturally works havoc with the timing. This would necessitate the speeding up of one or more numbers to get the program off the air on time. As a protection against such unforeseen fluctuations in tempera-

ment and tempi, the program should have what is known as a "cushion" of time, preferably near or at the end. This "cushion" can take the form of a fixed theme or an extra number that can be played as long as needed and then faded, to bring the program out on time.

Some tips on rehearsal procedure. Budget your rehearsal time very carefully. It is bad policy to devote too much time to the orchestra and too little to the vocalist. Great care and tact must be used so that the conductor and the singers will feel that you have dealt fairly with them. If you hurry a singer in rehearsal, the performance will be ragged and unsteady. If a conductor has been rushed, his timing will vary on the air—which is bad for you and bad for the program. Finally, refrain from talking in the control room and devote the entire time to *listening*—it is your ear, not your mouth, that has to be on the job. Always reach your studio before the musicians do, and be sure to make the proper seating arrangements before they arrive. Become thoroughly familiar with the physical properties of the studios; if there are some special acoustical devices in the studios, such as movable panels or screens, you should know what to do with them and what effect they will have on the quality of the broadcast. As director, you are responsible for deciding where the microphones should be placed; but the actual placing of the "mike' 'is the studio engineer's job. If you wish to have a "mike" moved or adjusted in any way, don't go out and do it yourself; ask the engineer to do it. He takes as much pride in his job as you do in yours.

The production log. The director is expected to keep a complete and accurate record of all details connected with the rehearsal and the broadcast. This "log" must show the actual time spent in rehearsal, including overtime. Names of all soloists participating in the program must be given. If there is a choral group, the name of each singer must be included. The program

log should show the timing of each musical number, both in rehearsal and as it went on the air, as well as the timing for each spoken introduction (continuity). All changes made in the script during rehearsal or on the air must be transferred to the "certified master copy," which is permanently filed in the company's records. As its name indicates, this master copy must be certified by the signatures of the production director and the announcer who read the continuity. Often a stand-by program has to be prepared, in case something happens to interfere with the broadcast of the regular, scheduled program. This is especially important when pickups from distant points are planned. In such cases, the director is expected to complete the same kind of full and accurate record regarding the details of the stand-by program.

SOME SPECIAL PROBLEMS

Balancing the accompaniment. It has always been a difficult matter to determine how much prominence the accompaniment should have in relation to the singer's voice. A simple method for adjusting the balance in piano accompaniments is to move the piano on or off the beam of the singer's microphone, depending on whether more or less tone is desired. Printed orchestrations for vocal accompaniments are generally foolproof, as they nearly always balance themselves; but special arrangements often present serious difficulties. Frequently the brass is too heavy and the strings are too solid with countermelodies. When dealing with such arrangements, it may be necessary to use separate microphones for special woodwind or brass effects.

How many microphones? For years many radio stations operated with only one microphone in the studio and obtained good results. Even though more microphones are now available if they are needed, most engineers and production directors agree that the best results can still be obtained with one mike. Some

directors, it is true, like to experiment with multiple-microphone pickups, sometimes using a separate mike to pick up each section of the orchestra. I have already indicated where, in the case of certain popular arrangements, such a method might be desirable for the sake of clarity and balance; but if you ask an experienced engineer for a multimike pickup, he is likely to counter by asking, "Why"? If you value your professional standing, be sure you know all the answers to that question. My own advice in this matter, based on more years of experience than I care to remember, can be summed up very simply: Always try to pick up your program with as few microphones as possible.

A matter of ears. To be born with the gift of "perfect pitch" is a musical blessing that will stand the director in good stead; but even if you have not been so fortunately endowed by nature, you should have a good "ear" in order to be a successful director. In fact, it might be said that a director is as good as his ear. If you can't tell whether the singers are on pitch or whether the instruments of the orchestra are in tune, or if you can't distinguish the tone quality of the various orchestral "choirs," you will be that much handicapped in trying to do a top-notch job. There are many radio directors who are unable to hear the maximum of high and low frequencies. This unfortunate deficiency can usually be detected only by submitting to the Bell Laboratory's hearing tests. When such deficiencies are disclosed, persistent training may develop a keener and more discriminating sense of hearing.

Personality plus. The human equation is vital in the director's profession. Character counts tremendously. The radio director should be an understanding person, possessing firmness tempered with kindness, tact, good judgment, and persuasiveness. Temperament, technical knowledge, musicianship, and familiarity with policy and organization—these are the four cornerstones of a successful career in radio directing.

Composing for Radio

BY MORRIS MAMORSKY

A RADIO conductor once asked a composer to do some music for his program. "I know you'll be terrible the first few weeks," he said, "but you'll improve, I'll take a chance on that." This is just one illustration of the spirit of optimism and experimentalism that is at the heart of radio, and I find that this makes a very stimulating atmosphere for producing good work.

Composing music for a dramatic program is a fifty-fifty proposition. A man must know his music, but he must also know his radio. He needs to possess a flair for the dramatic, combined with a willingness to collaborate with the other persons who are involved in each show. He must be willing and adaptable. In radio, his music must be written primarily with a view to the story values of the script. He must come down from the podium and enter the control room. He must train his ear anew to learn what blends most successfully with actors' voices, and what brings out all kinds of emotional responses from his listeners.

Some radio composers have at some time been radio arrangers or production men; and some producers first entered radio as composers. So much the better for the show. For those of us who enter the world of radio as laymen, however, it is very important to sit and absorb a knowledge of radio production methods. I have heard more than one radio executive say of a composer-prospect for radio: "I know he's a famous composer. I

know his music is played by every major symphony orchestra in the country. But the point is, if he's the prima-donna type, he's no good in radio."

For a number of years the National Broadcasting Company has had regular staff composers on its payroll; but the majority of radio composers are still working on a free-lance basis for the companies and for the agencies. There are, at the most, approximately fifty composers who make their living by writing radio music. There are at least 400 other composers throughout the country who live by teaching, lecturing, editing music for publishers, conducting, playing in orchestras, or writing newspaper criticisms. I hope that, in the future, many more of these thoroughly trained composers will be drawn into radio composing.

If this is to happen, it will necessitate the overcoming of barriers on both sides. The composer will have to cease looking down upon radio music as hack work and regarding it as unworthy of his best efforts. The radio executives and directors will have to undertake to train these men in the techniques of radio in general and radio music in particular. One cannot expect composers to rely on intuition in these matters.

CONTRASTS BETWEEN RADIO AND CONCERT COMPOSITION

The radio type of composition calls for a completely different approach on the part of a composer. Where formerly he wrote in terms of themes, variations, and development, he now has to work in terms of bridges and backgrounds. Where previously he had at least eighty men seated in the orchestra to perform his work, he is now expected to produce equally telling effects with small concert groups. Where once there was ample rehearsal time for his selection, there is now sometimes only two hours in which to rehearse actors, sound effects, and music. In the concert field the composer is usually given at least three months to complete a commissioned manuscript. In radio, three days is, more

often than not, as much time as he can spend on the score for any one show.

No longer is the composer sole arbiter of what he shall write. He must work within the limits of a story, as detailed by a script-writer who may or may not have a knowledge of music. No longer is his own personal style of composition his main stock in trade. He must be able to produce equally well imitation folk tunes, jazz, comic effects, sad or sentimental music, and also symphonic music. The script-writer sets down the period, nationality, and mood quality of the musical cues for his story. The director confirms this mood, sets time limits for the cues, and tries to define the quality of the music desired for that particular show. Then all that the composer has to do is to write the music and try to satisfy these men, also the orchestra, the actors, the agency men, the sponsor, and—oh yes, the radio listener. That is all.

Some radio composers have a tendency to copy musical effects and patterns from the so-called classics or standard works. Other radio composers habitually write with such marked originality, that the music claims more of the listener's attention than it should, since the story is always the main element of the show. These are, of course, both extreme tendencies. In actual practice, a radio composer should only copy or arrange music when he is dealing with folk, period, jazz, or religious music. They are part of everyone's environment, and they belong in radio shows. When it comes to mood music, musical sound effects, and symphonic treatment, I think the original approach is preferable. Frequently a listener will associate familiar concert pieces with previous experiences of his own, and this will draw his attention away from the script show that he is hearing. It is best to avoid this tie-up by providing something less familiar but just as effective.

For these reasons and many more, the man who intends to

write music for radio must revise his techniques of composition. Because the pressure of radio requires him to "turn out" from one to five shows weekly, there are certain short cuts that he must employ. It is obvious that he must train himself to look for simpler methods of orchestration, so that his performers may achieve the desired effect in the allotted time. He must build up a comprehensive backlog or file of his music cues, which he can use when inspiration fails or when he is assigned a script with too little time for preparation. He should do a certain amount of library research in connection with his composing, to keep his work authentic as well as interesting. He should also make a point of listening to available recordings of shows that he has written, so that he may profit by his mistakes and gage the success of his experiments in orchestration.

Radio is a wonderful laboratory and a stern teacher. It helps a man discover new potentialities within himself in the way of creation. Radio also attracts the attention of both musicians and laymen to his abilities, and so is satisfying to his ego. I do not say that this furnishes a complete answer to the problems of the composer, but it certainly provides the testing stone and foundation for good, solid composition. Music critics have been clamoring for subsidy of composers for years. And now we see the actual beginnings of this—all unheralded—in the field of radio.

THE PURPOSE OF RADIO MUSIC

Radio music is just one of six elements of a script show. The other elements are (1) the script, (2) the direction, (3) the acting, (4) the sound effects, (5) the engineering.

The place of radio music in relation to the entire production, seems to me to be fourfold:

1. To lend color and emphasis to the show.
2. To create an atmosphere of dramatic tension.

3. To enhance the enjoyment of the listening.
4. To provoke the listener's consistent attention.

Generally speaking, these same purposes may be said to hold true also in the case of music for motion pictures, opera, and ballet; but actually these three media all appeal to the eye as well as to the ear. Hence in these instances—since people tend to be quicker with the eye than with the ear—the music may be loud and long, and still not detract from the story or idea element in the presentation.

In radio, however, there is only one sense to be appealed to —the ear. Because of this, it is all-important that the musical sounds shall not compete with the actors' voices for fear that the continuity and meaning of the story may be lost. Once, I remember, a very well-known composer and an equally famous author combined to produce a much-publicized broadcast. The author, in well-modulated and scholarly tones gave a reading of passages from his book, while continuously, along with this, the music surged and soared during the entire half hour. It was exactly as if the hearer were listening to two different stations at the same time.

Let us now consider in detail the four uses of music in radio.

1. *To lend color and emphasis to a show.* Radio music should punctuate the story and not eclipse it. The music may serve as a sort of counterpoint to the story itself. It is used between scenes or played as background, in much the same way that curtains, scenery, and lighting are used in stage productions. In motion pictures camera angles and cross-fades are emphasized and the camera is dollied to induce certain emotional effects. In radio all this can be accomplished with music.

2. *To create an atmosphere of dramatic tension.* The use of original music played by an orchestra also has the secondary effect—or purpose, if you like—of putting the actors in the mood

for the show that they are performing. A gag tune, jazzy treatment with bizarre effects, often serves to keep them on their toes in the brittle delivery of comedy lines. Serious, symphonic treatment of bridges and backgrounds, on the other hand, promotes a mood of depth and intensity in their acting, and helps them stay within the imagined situation that they are portraying.

3. *To enhance the enjoyment of the listener.* One element of all good art, in respect to the audience, is the device of alternating tension with relaxation: in art a single ugly factor will emphasize the beauty of the whole; in dramaturgy each great character has his flaw and each minor character his moments of vision. Similarly, in a script show the music points up, or enhances, the whole show. It gives the listener time and rhythmic movement, to help him relax from a tense situation in the story. It accompanies what psychologists call "the most favorable pause." Sometimes, too, it brings zip and lift to a show that might otherwise be ponderous and wordy.

The average listener is not consciously responding to the music in the show. The music is there; it is actually doing something to him, and yet he never misses a single word of the dialogue.

4. *To provoke the listener's consistent attention.* Enjoyment and attention go together. Attention, however, is rather a more active state than enjoyment; and in radio, music may be a real attention getter. It can do things for the story that the spoken word and the sound-effect man cannot do. It is the imaginative frame for the action. It is the scenery and the spotlight. It is the off-stage voice and the choric comment on the dramatic events. When the story is tearful and sentimental, the music need not echo this only, it can recall the listener to himself and make him say, "If that was sad, I hope the next will be more hopeful." Conversely, if the action is merry or full of slapstick—Boom! Crash! a sudden catastrophe and the trickle of

laughing music—and again the listener's attentive faculties swing forward with the story.

TECHNICAL DETAILS OF RADIO COMPOSITION

Sometimes the radio composer writes his music without previous consultation with the director, any necessary revision being done at the time of rehearsal. Not having worked in this way I am not in a position to judge how successful this method may be; but I shall try to describe in some detail the method that I employ at present. The procedure is as follows:

1. After reading the script, the composer has a conference with the director, in which they jointly accept or revamp the music cues that the script-writer has called for.
2. The composer then writes the music, and times each cue so that his director may have a fairly accurate idea of the probable playing time of the whole show.
3. The copyist receives the score, returning the parts to the radio librarian in time for the show's rehearsal.

Contemplating this procedure, one understands why the temperamental and uncompromising composer is out of place in radio. He is obliged to deal directly with the script-writer and the director, two individuals who carry most of the responsibility for the quality of the final product. He must also deal with really excellent musicians, who are highly critical and sensitive to what he is composing for them to perform.

Radio has a sort of short-cut language that is used by the director and the composer in their conferences. This language is used to refer to the types of music called for in the average script, although the script-writer himself rarely expresses himself so simply in detailing the actual music cues. As these words are not generally known to persons who have not worked in the field of radio, I shall try to describe what the terms mean to us. There

are two types of cues—bridges and backgrounds. The bridges are the short musical pieces played between the scenes, *bridging* the scenes together. Sometimes a script-writer describes the nature of his bridges most eloquently, and sometimes he writes simply "Up and fade," by which he means "Just some music." The usual kinds of bridges are these:

1. Passage of time.
2. Change of locale.
3. Emphasis.
4. Emotional tags.
5. Comic effects.
6. Gag bridges.
7. Neutral bridges.

Among the above headings, let us consider first numbers 3, 4, 5 and 6, which have specific reference to the action in the script.

Emphasis. For emphasis we frequently use what is known as the sting-and-stab device. This is often employed in documentary and propaganda shows, and is a most effective dramatic device. For instance, after a momentous declaration has been made or a dreadful disaster has overtaken the characters of the story, a crashing discord and a screaming echo will help send the forces of the story home to the listener. Nevertheless, this device should not be used too frequently in any one show, as its effectiveness decreases with the number of times it is used. Let script-writers beware.

Emotional tags. An emotional tag may be in itself both the echo and the prelude to action. The hero declares his love for the heroine, but still there is a feeling of misfortune connected with this. Here the music can be soft, slow, and passionate, with a hurried or muffled underbeat coming in toward the end of the cue, leading immediately into the next phase of the script.

Comic effects. A comedy cue is usually a musical paraphrase

of the funny action in the script show; for instance, the entrance of a slow-speaking, stumbling, clownish fellow, or the dropping and breaking of a foolishly cherished object, are usually accompanied with musical laughter. The mocking "wah-wah" on the trombone, the laughter of saxophones, and the comic wailing use of strings are all commonly used in achieving comic effects.

Gag bridges. A gag bridge is a cheap and effective device used in many an over-all comedy script. For instance, in a show about babies, variations on "Rock-a-bye Baby" are always good for a laugh. This is what is known as gagging a tune. Or, to give another example, a character in the story makes a remark that leads the director and the composer to think of similar words that occur in the title of an old and slightly corny tune. This always brings a chuckle. One person will say, for instance, "Mary dear, how you've changed!" and the orchestra will rip into the ether with "The Old Gray Mare She Ain't What She Used to Be."

The other types of bridges, mentioned under headings 1, 2 and 7, are of a more general nature. They are essentially mood music, and apply rather more to the over-all character of the script than to the nature of any specific person or dramatic event.

Passage of time. This can be denoted in a variety of ways, from the chime of a clock to the thunderous clamor of a stormy passage of music, followed by something slow and pastoral, to indicate the arrival of the morning after.

Change of locale. As the action moves from one scene to another, it is possible to combine music from both locales in the one cue. For instance, to pass from the village green to the king's banquet hall, first a few phrases from a peasant dance are played; then the music sweeps into the strains of a typical court ceremonial procession.

A neutral bridge. A neutral bridge, like "up and fade," is

just music. The script-writer does not expect the music here to lend any color to the action, because it is simply to serve as the curtain between scenes and to show that one particular phase of the story has been completed.

In addition to bridges, musical backgrounds are composed. These consist of music to be played in the background, behind speeches and action, and not necessarily between the scenes. Backgrounds color and intensify the speeches. Sometimes they introduce the element of suspense where it is most needed. Of the many kinds of background, I shall try to describe only those which I use most frequently. They are

1. Backgrounds based on the use of montages.
2. Backgrounds based on the use of leitmotifs.
3. Backgrounds based on the use of folk music.
4. Backgrounds based on the use of standard symphonic music.
5. Backgrounds based on the use of original symphonic music.

Like emphasis bridges, backgrounds can be overdone. Often it is the script-writer himself who knows and really loves music and has a considerable record collection of his own who tends to excess in this direction. Too much music stifles instead of enhancing a script; the result is a case of music for the sake of music, which is all wrong in a dramatic show. In connection with a composer's use of percussion in an orchestral score, one writer stated that the best rule for the composer is to go through the score after he has completed it, and delete half the percussion parts. Similarly, it might be a good idea for a certain type of script-writer to cut out half the music cues before submitting his script.

1. *Backgrounds based on the use of montages.* A montage effect in radio is much the same as a montage effect in motion pictures; *i.e.,* a succession of images and sounds piled rapidly

atop one another to give the impression of haste, an accumulation of emotions, or a most important event.

2. *Backgrounds based on the use of leitmotifs.* Occasionally the composer goes to the trouble of plotting a script in terms of motifs in much the same way as is done in opera. Of course, a really exceptional script seems to demand exceptional care when it comes to the music, as in this way the story may be given a larger setting and a feeling of grandeur in keeping with the script. In the particular case of a show about a mother, her son, and his sweetheart, it was decided to give each one of them a motif. When a scene about any one of them was introduced, his or her motif was used with variations; and when all three appeared together in a scene, the musical patterns of their several motifs were combined.

3. *Backgrounds based on the use of folk music.* When the composer is confronted with a script dealing with a foreign country or with a period piece, there is rarely a better device than the introduction of folk tunes into his backgrounds. Sometimes he may choose the actual tunes of the place or the period involved, and at other times he has the fun of composing original tunes in the spirit of the particular type of folk music required. This device usually brings a real lift to a script and considerable enjoyment to the listener. Although it does little to intensify the dramatic action, it introduces very pleasant color into the production.

4. *Backgrounds based on the use of standard symphonic music.* Standard symphonic pieces, as has already been shown, are very rarely introduced into a script show, because of the nature of audience responses. However, perhaps this statement should be qualified. The more familiar concert pieces would best be avoided, but standard music that is not so familiar to general audiences may sometimes be used most effectively. For instance (and only once, to my knowledge, has a script-writer called for

this device), as background for a deeply moving tale of modern times, the musical backgrounds requested had to have the feeling of pure classic line. In this way the script-writer, who must be given credit for his artistry, felt the need of toning down the intensity of his story with something entirely different from the mood quality of the drama itself. He wanted something orderly and coolly beautiful to restore a feeling of balance to the whole presentation. So it was decided that excerpts from Purcell should be performed in place of original bridges and backgrounds. None of these excerpts was chosen for any direct reference to the details of the story; they were selected simply to offset the harshness of the drama. This is too subtle a device to be employed ordinarily. In such a case, the composer works as editor rather than composer.

5. *Backgrounds based on the use of original symphonic music.* In my own experience, this use of the symphonic treatment of script shows emerged from the preceding category. We asked ourselves (the director and I), "If this method of editing standard symphonic music is so successful, might we not try writing music with the classical feeling, yet entirely original?" So that is what we did. By symphonic treatment, then, I mean that themes of a more symphonic character suggested themselves to me, and my attention was turned automatically to writing in a more symphonic style for the orchestra—getting away from the purely commercial approach and experimenting a little. The result received very favorable comment, in conjunction with praise for the entire production, which, in this way, gained in artistic quality.

At present, there is a distinct tendency on my part to use this treatment when confronted with historical subjects, with adaptations of classics in theater pieces and literature, and with fantasies. These things stir the imagination of the composer beyond the everyday limits of the here and now, and cause him to think

in terms of larger musical ideas. In this expansion, of course, he may be either given free rein or held in check by his director.

One point that is particularly striven for in the use of the symphonic treatment, is to offset, or counterbalance, the dramatic highlights of the show. Instead of echoing and foreshadowing the action, as is done in the case of straight radio bridges, we deliberately construct music cues that shall contrast with the action. After all, if the dramatic climax is sufficiently strong in the clash of voices, what need for the musical device? So it occurred to us that, after an enormous climax, something soft, slow, and sweet would bring the story into greater focus and, in this way, heighten the dramatic intensity.

There is an additional use for the symphonic treatment. Sometimes, because of the nature of the subject matter of a script, it cannot help being dull for the average listener. In this case, although there are in the story but few voices and no dramatic conflict, external drama can be lent to the tale by the use of little symphonic pieces written to take the place of bridges and backgrounds. These are frequently developed from the initial theme derived from the main idea or character in the script. In performance, we play this music high (in volume), so that it adds color and variety to a script that would otherwise be impracticable in radio (always subject to letting the voices demand the major portion of the attention).

THE PRACTICAL ASPECT OF RADIO COMPOSITION

By the practical aspect of radio music, I mean that phase of radio where one strives to supply his special technique to achieve the purposes of radio music.

In this particular phase of radio the composer does not stand alone. He is not the only person responsible for the quality or the effectiveness of his work. His path is blueprinted by the script-writer and he is guided by the director. This section, there-

fore, will be devoted to the influence of those gentlemen upon radio music. It is undertaken in the light of certain practical considerations which, as a composer, I feel that they should have in the back of their minds when assembling the music for a script show. The practical considerations are as follows:

1. Does the music occur at the right dramatic moments?
2. Does the script have a definite musical pattern?
3. Are the directions clear and businesslike?
4. Do the script-writer and the director show faith in the creative intelligence of their composer?

If a radio man, on studying a script, can answer "yes" to all these questions, then the script is most likely to stand up under other radio standards, too. If, however, the answers are negative, then it may be seen that a script in which poor use is made of music is weakened dramatically.

By poor use of music, I mean poor from the dramatic standpoint. This is paramount. In the second place, anything that fails to catch the listener's interest or that hinders it is also poor radio music.

By suggesting these practical considerations, I am interested in showing that judgment in the matter of suitable music for accompanying a script is never a matter of pure intuition, as some would suppose. Just as there are definite standards for good literary and dramatic script-writing, and specific advantages and limitations to be looked for in the direction, so there are standards for good radio music that are quite as definite. Whereas the *purpose of radio music* is the *sine que non* of radio composition, and is of prime interest to the student and the critic, *the practical considerations* should be employed by every script-writer and director.

It is to be hoped that potential script-writers and directors will study the following criticisms in the spirit in which they are in-

tended. Through consideration of some of the mistakes of present-day radio production it will undoubtedly be possible to raise the standard of radio composition and of radio production, in general.

1. *Does the music occur at the right dramatic moments?* The right dramatic moment for music is that time when no other device—sound or voices—can create the proper emotional effect. As has already been indicated (see the paragraphs on bridges, above) there are many types of right dramatic moments, subject in the final analysis to the director's conception of the dramatic movement in the story as a whole.

Sometimes a script-writer, like anyone else, may not be up to his usual mark. The man who drives himself to produce new material freshly handled every week, is heading for a breakdown; and men who cannot have vacation when their inspiration fails must adopt short cuts too. They cannot repeat passages of dialogue from earlier shows, so sometimes they pad their shows with music. Whenever they find themselves writing an awkward scene that they cannot seem to end smoothly, they write "Music: up and fade." In this way they signal, "This time I'm stymied. Please help a fellow out!" No matter how much these men deserve our sympathy, the fact remains that such moments are rarely right dramatic moments for music, and in these instances their scripts display a poor use of radio music.

There are also directors who have this same tendency. They like to hear music going on continuously throughout a show. They realize how very important music can be emotionally and they insist upon a great amount of it. In preparing a script for production, they sometimes feel that the speeches do not carry sufficient dramatic weight, and so they insist on "backing" everything that is being said and done. These men are too fussy; they annoy the composer by ordering two seconds of one type of music, modulating to three seconds of a different type of music,

and so on. They use flowery phrases when they describe music, and they make the music seem very important to the production. Then, at rehearsal time, these same directors realize suddenly that they have ordered too much music, and so they slash the score and underplay the rest. They have the engineer turn the backgrounds down so low as to make them into a meaningless rumble. This is a flagrantly poor use of radio music, a confusion to the listener, an insult to the composer, and a waste of money to the company.

2. *Does the script have a definite musical pattern?* By a definite musical pattern I mean to indicate that the script should show a consistent use of musical devices. For instance, a script may call for music to back the narrator's voice, but suddenly, for no reason at all, it may forsake this device and leave the narrator unbacked, transferring the use of backgrounds to the action. Or a script may look as though it were going to use straight dialogue to indicate action in the present, and musically backed dialogue to indicate past scenes. Again the script-writer may seem to forget this setting and alter his plans, by calling for music to represent the present and silence to represent the past.

In this way, many script-writers show that they have no very clear idea of the place of music in relation to the script. It would be better just to write the word "Music" in the script, and to let the director and the composer determine the nature of the cues, than to show one's ignorance in this manner. Such indiscriminate use of music is always poor, because it disrupts whatever dramatic unity the story may require, and so fails to enhance the enjoyment and attention of the listener.

There is also the "sting-and-stab" school of script-writing, where no attempt is made to achieve a musical pattern. To these writers, music is just another sound effect. Although the "sting-and-stab" device is very dramatic, it is, as has already been indicated, much misused. It is effective inversely to the number of

times it is employed. Every exclamation calls for an ejaculation, and this type of writer overdoes it every time. He kills the dramatic continuity of his show. Here is a particularly obvious example of his style:

HE: Where are you going? (Sting!)
SHE: Home. (Stab!)

After all, what is the difference between a sting and a stab?

Another type of script that lacks a musical pattern is the choppy script. This type of show is boring in the extreme, because it is broken up into countless little scenes joined by miniature musical bridges. I would rather compose a full half hour of meaningful music than to have to write five seconds of music to follow every two lines. One runs out of ideas at that rate, and the music sounds the same all the time. Such music has nothing to contribute to the show, either of color or of intensity, and so reveals a poor use of radio music.

More blameworthy than any of these gentlemen, however, is the director who, confronted with such poorly patterned scripts, insists on accepting as gospel every music cue written in them. Such a director has not the slightest idea how vital a role music can play in a script. It is really part of his job to revamp a script, if necessary, to cut out or insert music where it will have the most telling dramatic effect. That man would do well to follow the advice of his composer in their conference, instead of being afraid that the composer will discover how little his director knows about music. There is no way of concealing so obvious a defect from a good musician.

3. *Are the directions clear and businesslike?* The radio composer welcomes clear and businesslike directions. Some scriptwriters, of course, are writing their scripts with an eye to future publication. They feel compelled to write music cues that will stimulate the imagination of the average reader. But a com-

poser with a good dramatic instinct does not need to be treated as an amateur. Give him a cue that says "heavy," "light," "hurried," "passionate," and it will give him the best possible idea of what is required. There should be fewer overelaborate musical directions in scripts, such as this for instance: "The sound of riveters digging a tunnel 2,000 leagues under Far Rockaway; but at the same time a sort of skyscraper effect and the feeling of machines." Such directions may appeal to the literary man, but they are only a joke and an annoyance to the composer.

Directors, too, may be carried away with the spirit of the script and start using wordy descriptions and much gesturing to indicate the musical quality of the cues. They squint their eyes, looking into the distance, and with their hands they snatch musical phrases from the smoke-filled air. Perhaps this is inspiring to the hack writer, but most radio composers are beyond that. They want to be directed, not coached. They are creators, not students. A director who may have a perfectly uncanny knack of picking the right actors for his show, and of pacing the show without a flaw, may yet be very "corny" in his feeling for music. By imposing his taste on the composer, he is actually demanding music that is inferior to the other elements of the production. And this is, I submit, an unwittingly poor use of radio music, because it is inconsistent with the superior quality of the other elements in which the director is more expert.

4. *Do the script-writer and the director show faith in the creative intelligence of their composer?* Please, Mr. Director, and Mr. Script-writer, trust in the creative intelligence of your composer. In his own quiet way he is just as clever and sensitive as you, when it comes to discerning what music the story requires. There is no need either to talk down to him or to try to impose your musical ideas upon him. What he writes will be neither purely pictorial nor purely theatrical. His product, you can count upon it, will be musical, which is just what the show requires.

The script is graphic, the direction is theater-wise, the music is musical; and together they make a fourth product called radio show. Hence, the triple strength of a radio show. It appeals to the mind, the heart, and the ear—and whose ear is more sensitive than your composer's?

Conducting for Radio

BY FRANK J. BLACK

In one of the many lively and affectionate letters that Felix Mendelssohn wrote to his family from Italy, he describes a theater in Rome where he went to hear an opera. One detail, in particular, caught his eye. "Over the orchestra," wrote Mendelssohn, "is a picture of Time pointing to the dial of the clock, which revolves slowly, and is enough to make anyone melancholy." That picture of Time pointing to a clock might well be adopted by the radio conductor as a symbol of his profession. However, if the sight of the clock hands revolving slowly and inexorably fills him with melancholy, that is an indication of temperamental unsuitableness for the job. Facing the music is part of every conductor's daily routine; but the radio conductor, in addition, is expected to face the clock with the same cheerful courage that a champion pie eater displays vis-à-vis his twenty-seventh helping of pastry. Strictly speaking, the man who is supposed to do most of the worrying about the time element in a broadcast is the production director. But the conductor, if he is a practical and cooperative person—and he has to be both in order to make good in radio—will share this preoccupation and will act as though the movement of the clock hands were of more significance to him than the revolutions of the planet earth on its axis.

FACTORS OF A CONDUCTOR'S FITNESS FOR RADIO

As far as technique is concerned, there is actually no difference between conducting for radio and for the concert hall. If you have assimilated what Scherchen calls "the teachable technique of conducting" and topped it off with practical experience, the sum total of your knowledge and ability can be applied as effectively in a broadcasting studio as anywhere else. But the overall effectiveness of any functional activity cannot be measured solely in terms of technique. Factors of character and temperament are often decisive in determining a conductor's fitness for radio work. These factors, of course, are always important under any circumstances; but they acquire particular significance in radio because of the exacting conditions under which broadcast programs are produced. The paramount element of time has already been stressed. Broadcasting is based on split-second calculations. If a concert finishes five minutes late, nobody cares—except those who may have to catch a train, and the conductor feels no responsibility for them; but if a broadcast runs one minute over, that is a catastrophe—at best, a terrible *faux pas*. A tendency toward erratic tempi and inconsistency in timing may be venial faults in a concert conductor—at least, in a conductor of genius—but they are very grave drawbacks in a radio conductor. With few exceptions, less time is given to rehearsing a broadcast than to rehearsal for an ordinary concert. The radio conductor must be able not only to get good results, but to get them quickly.

Another important human factor that the radio conductor has to take into consideration is his relationship to the production director. This, obviously, is a factor that does not enter into the concert picture, except when a regular concert happens to be a broadcast, as well. In preparing a nonbroadcast concert, the conductor alone is responsible for every detail of rehearsal and

performance, save for such authority as he may wish to delegate to the concertmaster. In the preparation for a musical broadcast, the rehearsal is supervised by the production director, who is the responsible authority also while the program is on the air. Ability to accept this director-conductor relationship and to contribute to its smooth functioning on both the professional and the human level, is a *sine qua non* of the radio conductor's temperamental equipment.

Remember that the production director is trying to be helpful in getting your musical interpretation across to the listening public as faithfully as possible. You need to have confidence in the director. You may interpret Beethoven, but the director (with the help of the engineer at the controls) interprets your interpretation of Beethoven. Your ear tells you what goes on in the studio, but the director's ear is also at work in the control booth and, as the name indicates, he *controls* what goes over the air. (The final arbiter, of course, is Master Control, which usually does not interfere, however, except in an emergency.) You should show a sympathetic interest in the director's problems. Find out all you can about the nature of his job and make it easy for him to carry out his functions. For example, to facilitate the director's task of timing, run through each number in rehearsal at least once without interruption, whenever that is feasible. He has a stop watch, but continual interruptions complicate his task greatly.

As a further sidelight on the human-relations angle, it is a good idea to be on friendly terms with the engineer. He is the *deus ex machina* who can make or mar your reputation. With the turn of a knob he can open the door to oblivion for you. Actually, his chief concern is not your reputation but the needle over which he constantly keeps watch. If your crescendo threatens to upset the equilibrium of that needle—well, it's just too bad for your crescendo. It simply never reaches its intended

climax. On the other hand, the engineer can achieve a "fake" crescendo from his control panel that would make Rossini green with envy. Yes, he is a very important person.

Until television changes the situation, sartorial elegance and graceful gestures will be of less concern to the radio conductor than to his confrere of the concert hall. Of course, you may have to wear formal clothes if you are conducting a symphonic broadcast in a large studio for an invited audience, but even then the audience in the studio is but a small fraction of your total unseen audience—for whom you also remain an unseen factor. Your appeal will be made almost exclusively to and through the ear, not the eye. Accordingly, there is no place for purely spectacular effects.

So far we have been talking about radio conductors as though they were a separate species. There are, of course, conductors who work exclusively for radio and are employed as staff members of broadcasting stations or companies. The National Broadcasting Company and other networks each have several regular conductors on their staffs. In addition to these "regulars," almost all conductors of any prominence have given broadcast performances at one time or another. Now that many of our leading symphony orchestras are having their concerts broadcast regularly, more conductors are coming into closer and more frequent contact with radio. The NBC Symphony, the first symphonic orchestra created exclusively for broadcasting, represents a special case. Toscanini has shared the podium of this orchestra with a long line of distinguished guest conductors, all of whom have thereby became radio conductors for the nonce.

PROPER BROADCASTING FACILITIES

Suitable facilities for broadcasting, particularly a well-placed and well-equipped control booth, should be standard equipment for all modern concert halls. When a concert has to be broadcast

from a hall lacking the proper facilities, the production director's difficulties are multiplied and the need for understanding and cooperation between conductor and director becomes more imperative than ever. Incidentally, a conductor has a right to demand that any director assigned to produce a symphonic broadcast be a thoroughly trained musician with a cultivated background and a comprehensive knowledge of the symphonic repertoire. Given these conditions, cooperation should not be difficult to achieve.

There is no fixed formula, no easy method for becoming a radio conductor. I myself began my radio career in 1922 as conductor of a weekly broadcast in Philadelphia—which means that I practically grew up with radio, since the industry was then in its infancy. In 1925 I conducted what is said to be the first radio symphonic concert, with an orchestra of twenty-one players. Radio has grown a lot since then—and it is still growing. Growth and change are the essence of radio. Equipment and technique change rapidly. Today FM, or frequency modulation, looms as a new development. The importance of frequency modulation for music is great. Tomorrow television will reveal the possibilities of a new art, different from radio as we have known it.

SPECIAL FACTORS IN BROADCASTING

Microphones. The radio conductor does not have to learn a special technique of conducting, but he has to take into consideration many special factors that are connected with broadcasting. There is, for instance, the matter of microphones. Some conductors insist on a single microphone, others on a multiple-microphone pickup, without really knowing the relative advantages or disadvantages of either. Both systems have their usefulness, but my motto is "Too many mikes spoil the broadcast." The chief objection to multiple-microphone pickups is that one instrument or group of instruments may stand out too prominently

and thus upset the balance of the orchestra. Remember that the brass and percussion sections are the most difficult to balance and control for broadcasting. Various instruments have peculiarities that can cause trouble. For instance, the "woof" notes on cellos and violas are dangerous to the needle in the control room; but this danger occurs only in the case of solo instruments playing close to the microphone.

Seating. A special seating arrangement for the orchestra in a broadcast is not altogether essential. A simple rule of thumb is that the louder the instruments are, the farther away they should be from the microphone. This requires that the strings shall be placed nearest to the "mike," with the brass and percussion farthest away. The woodwinds usually cause no trouble. When you are conducting "on the road," you may find orchestra setups that vary considerably from those that you use in the home studio. In such cases it is unwise to start making drastic changes, because the men in the orchestra get accustomed to hearing certain instruments playing around them in a certain position, and sudden changes may cause confusion. A large chorus is easier to handle for broadcasting then is a small one. In a small chorus, the soprano section is particularly difficult to balance properly.

Balance. Dance orchestras require special treatment. Here more "artificial" effects are needed, and the whole principle of balance is quite different. A dance orchestra is smaller than the symphony orchestra and presents special problems of balancing because there are four violins pitted against four saxophones and six brass instruments. The popular band leaders have their own methods for getting the results that they want. Guy Lombardo, in rehearsal, has each of his musicians play a solo passage and makes them hit the exact place on the dial that he wishes; in this way he gets the balance that is most effective for his purpose, although the same method would not be suitable for a different type of orchestra. The conductor of a dance orchestra has his

soloists play or sing very close to the "mike." In fact, the technique of some popular radio singers is calculated to be effective only through the microphone. These singers practically whisper into the "mike," and trust the engineer to supply the necessary amplification of volume. Singing close to the "mike" also gives more "presence" and helps to achieve that warm, human quality that enhances the personality of certain artists.

The radio conductor should know his studio. Different studios can affect the orchestral balance in different ways, and some may require a special setup to get the desired results. Naturally, the presence or absence of an audience in the studio will make a difference in the way the orchestra sounds. I have even noticed that Studio 8 H, the big NBC studio in New York, reveals varying acoustical conditions in summer and in winter. In the latter season, the heavy clothing of the audience absorbs more sound.

Limitations. The radio conductor should know the limitations of broadcasting—in the matter of volume for example. An orchestra can play as softly or as loudly as the conductor wishes, but radio cannot cover so extreme a dynamic range. There is no point in calling for either a pianissimo or a fortissimo that is not going to be heard over the air. Of course, the engineer—as has been previously stated—can control the dynamic effects with his dials; but it is advisable for the conductor, in rehearsing, to calculate his effects in such a manner that not too much will be expected from the engineer's panel control. In any case, bear in mind that the engineer has to prepare well in advance for a prolonged crescendo, since he must make sure that the dynamic peak of its climax will not cause the needle to "jump" beyond bounds. If you fail to provide for this contingency, the engineer will simply tone down the volume of the orchestra before you begin the crescendo, and let it increase gradually until it reaches the maximum number of decibels that is permissible. In calculating dynamic effects, the strings are always the easiest to keep within

allowable limits. Staccato passages can be heard over a wider dynamic range than can legato passages and without giving the impression of "crowding." The playing of long legato passages fortissimo requires great caution. On the whole, the cold, meticulous type of conductor, who calculates all his effects very carefully and precisely, is more likely to be successful in radio than the one who is of the temperamental, unstable type. The ideal, of course, is to be both clear and dramatic.

MUSIC FOR THE RADIO DRAMA

Conducting music for radio dramas is an important part of the radio conductor's job. The main problem in this case is how to divide your attention between the orchestra and the actors. It is impossible to pay equal attention to both, yet it is important to know what the actors are saying in order to conduct intelligently for the play. My own method is to wear earphones and to concentrate on listening to the actors. In a radio drama the orchestra is important, to be sure; nevertheless, it is secondary. In conducting "bridge" music, the greatest care has to be taken with regard to timing. For example, in a bridge marking a transition from a dramatic scene to a quiet, contemplative mood, a few seconds' difference in timing may either establish or dispel the illusion that you wish to create. I have composed a great amount of music for radio dramas, and I must admit that, in my judgment, bridge music is not a really satisfactory transitional device. Nevertheless, it will have to do until someone has found an acceptable substitute. Sometimes a narrator is used to introduce a change of scene, or some kind of sound effect serves this purpose. Silence—in the form of a pause—has also been tried, but silence on the air is frowned upon; so we usually turn back to the musical bridge, hoping that future historians will not describe it as the "pons asinorum of radio."

In playing background music—music that is heard "beneath"

the dialogue—the conductor should use his own judgment regarding the amount of volume needed. However, in actual practice, the production director may instruct the engineer to cut down the volume of the orchestra to such an extent that it can scarcely be heard. That is why, in writing music for radio plays, composers sometimes score it more heavily than they would otherwise, to make sure that *something* of the background will be heard over the air.

Occasionally in dramatic broadcasts the actors may be in one studio and the orchestra in another. This method of operating presents no technical difficulties and will work smoothly, provided that nothing unforeseen happens. However, if an actor misses a cue or if any other slip occurs, the conductor, not being able to *see* what is taking place, cannot immediately undertake to correct the situation.

Remote control in radio conducting has been tried out experimentally. Recently a broadcast concert was given with the conductor in the control room. A tiny loudspeaker was located in each player's ear, and the conductor gave his instructions orally through the loudspeaker system. The experiment was not successful, because the musicians found it disconcerting to receive oral directions in that unusual manner. Moreover, the existence of a pane of glass between the orchestra and the conductor detracted from the efficacy of the direct personal contact that should exist between the leader and his men. This may be an intangible factor, but it is important.

THE CONDUCTOR AS PROGRAM BUILDER

In broadcasting, as in the concert field, the conductor should be a program builder. Being known as an effective program builder can add greatly to a conductor's reputation and popularity. In building a program, beware of an idea that binds you too closely to a single type of music, which will make your pro-

gram suffer from lack of variety and contrast. The one-composer program, which can be effective if it is well planned and used with discretion, is more effective in the realm of symphonic music than in the popular field. In the latter category, Victor Herbert and Irving Berlin are two composers who can stand alone. In combining two composers on one program, taste and judgment are required. Brahms and Wagner go well together, as do Debussy and Wagner. The Debussy selections, however, should come first, because they would be an anticlimax after the Wagner. Always build up to a climax. Avoid programming too many works in the same key, as this becomes tiresome to the listener.

The conductor's responsibilities—and his opportunities—as a program builder do not end with merely devising the most effective selection and sequence of numbers. In order to take a constructive part in developing the musical taste of the public, wherein radio can be so powerful an influence, he must bear in mind that a liking for music usually comes about through long familiarity with the composer's idiom. At a first hearing, the average listener does not quite grasp what a modern composer is trying to say, and is likely either to remain unresponsive or to become definitely hostile. The fault is not necessarily the composer's. There were many listeners who objected to the works of Beethoven and of Wagner when those composers were living. The music of these masters has won its way to great favor with the listening public through repeated performance over many years. The public of our own time will appreciate and like some of our modern music only by hearing it again and again. The conductor should endeavor to see that the contemporary composer is given a fair chance, which means that his music should be heard not just once or twice but many times, so that it can have the advantage of becoming familiar to as many of the public as possible.

Arranging Music for Radio

BY TOM BENNETT

THERE is an amusing, though apocryphal, story about Maestro Fritz Reiner, famed for his coolly caustic comments in rehearsal. Once upon a time when he was about to rehearse *Till Eulenspiegel* he realized that the first horn player in the orchestra was not the usual one. Thinking of the many difficult horn passages that were about to be traversed, he turned to the substitute and said, "You have, of course, performed *Till Eulenspiegel?*" The answer was, "Nope." "Ah-h—you have undoubtedly heard this work?" The answer was again, "Nope!" Raising his baton, Maestro Reiner said simply, "I think you will enjoy it," whereupon he threw the down beat without further ado.

My feelings at this moment must be much the same as those of Mr. Reiner when he contemplated taking the horn player through the Strauss horn passages, for I have been asked to conduct a group of musically nontechnical persons through a study of arranging music for radio. Let me say, at the outset, that everything in this chapter is to be regarded as my personal opinion only. Any orchestration—in my estimation—represents one man's musical opinion. There are as many ways of orchestrating a given melody as there are arrangers.

It is amusing to find Rimsky-Korsakov, in his textbook on orchestration, laying down a series of hard and fast rules, only to

say on practically every other page, "except for special effects." In orchestration, there are no rules that cannot be broken. True, rules and principles must be learned before they can be broken, but these rules are intended as guides only.

In my opinion, there are three great innovators in the history of orchestration: Berlioz, Rimsky-Korsakov, and Ferde Grofé. I am considering them not as composers, but as orchestrators.

Hector Berlioz (1803–69) may be regarded as the father of modern orchestration. Naturally, the development of the orchestra was a gradual process, to which many composers contributed during several generations. By the time of Berlioz, the general make-up of the orchestra had become pretty well standardized; that is to say, the division into sections, or "choirs," had been definitely established in the classical orchestra of Haydn and Mozart, which was taken over by Beethoven (with the addition of clarinets). The strings were the foundation of the classical orchestra, with the woodwinds next in importance, then the brass and percussion sections. During the early nineteenth century remarkable improvements and inventions, such as those of Bohm and Sax, took place in the case of the brass instruments, which thereby acquired much independence and effectiveness. Berlioz made the most of these new opportunities, exploiting the full resources of each instrument and experimenting boldly with unusual combinations of orchestral "color." In the words of J. H. Elliot, "It was undoubtedly Berlioz who first revealed to the full the immense possibilities that had been lying fallow in the modern orchestra." His treatise on instrumentation, first published in 1844, has had a far-reaching influence, and it is still regarded as a fundamental work.

Rimsky-Korsakov did nothing to change the orchestral ensemble, but he did refine the balance among the various choirs, and he originated many new and startling color effects. Of his own *Scheherazade,* Rimsky-Korsakov said that it was not so

much a well-orchestrated piece as a good composition *for* orchestra. By this he meant that, instead of first creating a melody and then assigning this melody to, say, an English horn, he would decide first to use an English horn in his orchestration and then would write a melody designed to show this instrument to advantage. That is creative orchestration in its highest sense.

Ferde Grofé is, I realize, a "surprise package" in my group of historically important orchestrators. I give Grofé more credit than do most people, because he created an orchestra based on saxophones rather than on strings. This is a greater innovation than is generally understood. Where Berlioz and Rimsky-Korsakov needed many strings, because these were the base on which their orchestra rested, Grofé attained results with three and four saxophones, enabling the conductor to employ relatively few strings, using them only as an embellishment.

Without Grofé there would be no radio orchestra as we know it today. True, there would still be symphony orchestras heard on the radio, there would still be the traditional concert orchestras of twenty-five to forty players, and there would still be dance bands heard on the radio. But that type of orchestra which is peculiarly indigenous to radio would not have been known without Grofé. In this category fall such orchestras as those of Andre Kostelanetz, Morton Gould, Mark Warnow, Al Goodman, and many others, which play popular music in a concert manner rather than in a dance tempo.

One other who must be mentioned in speaking of the development of arranging for radio is Willard Robison, who conducted a show called "Willard Robison and His Deep River Orchestra" on most of the networks some years ago. Mr. Robison's orchestra was a small one, but the effects he attained with it were so unusual and distinctive as to gather great attention not only from the public, but from other radio conductors and arrangers. I am told that the distinctive quality of his orchestra was first set by a

then unknown symphonic composer, who is currently engaged in scoring films on the West Coast.

WHAT MAKES A RADIO ORCHESTRA

The present radio orchestra is an outgrowth of Ferde Grofé's innovation and, as we have said, it is based on saxophones and uses strings for embellishment. The saxophone players very often "double" on various woodwinds, enabling an arranger to get a variety of effects. The radio orchestra plays popular and light pieces in a style that is neither dance nor concert music. It is created to make the sometimes banal and trite music of the day interesting to listen to rather than interesting to dance to.

In describing the instrumentation of the radio concert orchestra, I will take up the saxophone section first.

Saxophones. Originally, this section, as a rule, consisted of three saxophones: two altos and a tenor. It now almost universally includes either four or five saxophones, and the larger groups use as many as six. A four-saxophone section might consist of two altos and two tenors, with the second tenor also playing a baritone as occasion may demand. The five-saxophone group might have two altos, two tenors (with the second tenor doubling on baritone), and a fifth saxophone permanently on baritone. The six-saxophone section would probably add a third alto.

Almost all saxophonists double on clarinet, an instrument whose fingering is very similar to that of the saxophone. The better players usually also play the bass clarinet, an instrument frequently used in radio orchestras. The first saxophonist rarely plays any other instrument except the clarinet. He is, in fact, the concertmaster of this section, and on him falls the responsibility of phrasing, tone color, etc., for the entire section. The other men can, and often do, play various woodwinds. Among my acquaintances, for example, there are four saxophonists who

double on the following instruments: alto, tenor, and baritone saxophones, clarinet and bass clarinet, flute, alto flute, piccolo, oboe, English horn, and bassoon. This type of musician is invaluable in the radio concert orchestra, since his presence there allows an arranger opportunity for a wide variety of effect.

Brass. The usual complement of brass in a radio concert orchestra consists of three trumpets and two trombones. In a number of cases a third trombone is added, and in many groups that I have known four trumpets and three or four trombones have been used. However, these latter groups seem to be of more value in a dance orchestra than in a radio concert orchestra. The real reason for having four trumpets and four trombones is that when an orchestra plays hot it will have many extremely high notes and this setup enables them to give the first trumpeter and the first trombonist a chance to rest their lips.

If the orchestra is a large one, it might also have one or two French horns and possibly a tuba. These, however, are used for special effects rather than for full ensemble work. The horns, for example, would have difficulty in keeping up with the rest of the brass in some of the faster ensemble passages that are being written today. Therefore, their chief value is to reinforce the woodwind, to play countermelodies against a soft string passage, etc. Similarly, a tuba in a full orchestral ensemble gives somewhat the effect of an elephant in a china shop. Its best use is to reinforce the trombones in quiet solo passages.

Rhythm. The rhythm section, an outgrowth of dance-band orchestrating, is a unit in itself and usually consists of a pianist, a guitarist, a string bass player, and a drummer. Any of these instruments may be augmented, but these four are usually the basis of the rhythm section.

Note that the bass player belongs to this section and not to the strings. This is an important difference and is, again, a principle first promulgated by Ferde Grofé. In symphonic writing, a bass

is almost always "chained" to the cellos, but in radio writing it is completely free and independent of the strings. The left hand of the pianist and the bass drum are usually concerted with the string bass, while the right hand of the pianist is linked to the guitar and the snare drum. It is this method of writing that gives their compelling rhythm to the modern popular orchestras.

Certain "doubles" are common in this section, too. A pianist will almost always double on the celesta, a bell-like instrument with a piano keyboard; and the drummer, of course, plays many other percussion instruments.

String section. As the strings in radio concert orchestras are used almost entirely for embellishment, this has given rise to a radically different method of writing music for the strings. In any symphony or old-style concert group, the strings are divided into first and second violins, violas, cellos, and bass. In a radio orchestra, the bass does not belong in this group and the violins are divided into either three or four groups, rather than into two; they are usually called A, B, C, and D violins, instead of first and second violins. The reason for this subdivision of the violin group is the complexity of harmonies in modern writing. Where a chord, in earlier days, was usually a triad (which could be played by first and second violins and violas), a chord nowadays very often is made up of four, five, or six notes, none of which is duplicated. Furthermore, when a full symphonic string section, numbering anywhere from twenty to forty players, plays a simple triad, the great number of players creates such rich overtones that the chord sounds very full. In radio orchestras, however, many strings fewer are used (anywhere from four to eighteen); therefore, the additional harmonic notes enable this smaller group to produce sounds similarly rich and full. A group of four strings will usually consist of three violins and a viola and, if five strings were used, the fifth would be a cello. This basic group may be augmented in proportion, giving eight violins

(divided into four A's, two B's, two C's) two violas, and two cellos. The largest groups usually consist of eighteen strings, divided about as follows: twelve violins (divided into six A's, three B's, three C's), three violas, and three cellos. If a D violin section is desired, a few men are taken away from the A section, the D section being ordinarily used to double the melody played by the A section an octave lower.

Full orchestra. To recapitulate, the basic radio concert orchestra would usually consist of eighteen men, divided as follows: three trumpets, two trombones, four saxophones, four rhythm, five strings (consisting of three violins, one viola, and one cello).

The instruments to be added next would probably be a harp and a French horn. As the group increases, more saxophones, more brass, and finally more strings will be added. The largest of these groups has probably about forty-five instruments. These larger groups usually add to the saxophone section a few legitimate woodwind players (that is, men who play only one woodwind), in order to improve the quality of the woodwind passages. A man who specializes on one instrument can obviously play it better than a man who plays a variety of instruments. There are, of course, many different combinations possible in a forty-five-piece orchestra; but a good one might have five saxophones, three trumpets, three trombones, three horns, five rhythm (including two string basses), one harp, two flutes, two oboes, and one bassoon. (We omit clarinets on the plea that all saxophonists are good clarinet players.) To these would be added twenty strings, divided into six A's, four B's, four C's, three violas, and three cellos.

ELEMENTS OF STYLE

Having now "defined the limits" of our radio orchestra, let us next consider the style in which it will present our music. The

style of the arrangements is what pleases the ear of the listener. It is this style that enables him to identify the conductor and that leads him to become a permanent member of a particular conductor's audience. I speak of the conductor rather than the orchestra, because in radio many musicians play for different conductors. You must understand that the radio conductor does not have a permanent orchestral organization. An orchestra will be hired for only the few hours of rehearsal and broadcast involved; and the same trumpet player, for example, might work for Andre Kostelanetz one day and for Morton Gould the next. For this reason, it may be said that the conductor, rather than the orchestra, becomes famous for a certain style.

Of the three basic elements of an arrangement—melody, color, and rhythm—rhythm is the quickest to tire the listener. An overemphasis on color will also bore the hearer, but not so quickly; while melody, of course, is the least wearing on the auditory nerves.

A style occasionally results from the use of a distinctive rhythm, although all rhythmic tricks are tiresome in the long run. To illustrate this point, it is necessary only to cite the various "shufflin' " rhythms, "bubble" rhythms, and programs based entirely on waltzes or other dances.

Since color is less wearing, the conductor's style usually develops out of this. Some conductors use an identifiable color, peculiar to themselves, at least once in each arrangement, in order to ensure recognition on the part of the listener.

The late Glenn Miller, before the war, originated a tone color in which a clarinet played the melody, accompanied by four saxophones. Three of the saxophones played harmony, while the lowest saxophone played the melody an octave below the clarinet. While this tone color was later used by many other conductors, it still spelled "Glenn Miller" to a majority of the listening public.

Andre Kostelanetz has several different ways of introducing a distinctive color into arrangement. His use of an echo-chamber on the string section, as well as the distinctive voicing of the string passages, helps to identify him. A number of other tricks are peculiar to Mr. Kostelanetz, one of which is interesting enough to be described here. You may have noticed many times that the final chord in one of his arrangements seems to echo in the air rather than to issue from any of the instruments. This effect is produced by having the trumpets blow a chord into a piano, the microphone being opened after the trumpets have ceased blowing, thus picking up the echo of the trumpets.

Ready identification of an orchestra sometimes springs from the leader's own instrument. Harry James, for example, plays his trumpet in a way so individual that one cannot mistake his orchestra. The same is true of Benny Goodman's clarinet. Many other leaders have based the identification of their orchestras upon their own instruments rather than upon any orchestral trick.

Style will occasionally be determined by the distinctive instrumentation of an orchestra; that is, an orchestra will have an unusual combination of instruments and gain its distinction in this manner. Shep Fields has formed an orchestra which, apart from its rhythm section, consists entirely of saxophonists who play many woodwinds. Since he has no brass whatsoever, this automatically gives his orchestra an unusual tone color. Paul Lavalle is another pioneer in this field. I might cite his woodwind group on the old Chamber Music Society of Lower Basin Street and his all-string orchestra for the Cities Service and Prince Matchabelli programs.

WHAT CONSTITUTES A GOOD ARRANGEMENT

Because melody is still the thing, let us consider the best ways of presenting the melody.

A good arrangement, in my judgment, is one that has clarity of melody and contrast in color. In other words, the melody should usually predominate, there should be sufficient contrast of color without giving the music too rich a texture, and the orchestration should never be overarranged.

Whenever an orchestra is playing a new and unfamiliar tune, the orchestration should be devoted almost entirely to the presentation of that melody played as clearly as possible. On the other hand, when the orchestra is to play a well-known "standard," such as "Georgia on My Mind," many more tricks of color and rhythm may be used to freshen the presentation. A method of procedure frequently employed is that of starting the arrangement with a little rhythmic ground figure, developed and treated in several ways.

All these stylistic treatments are properly the province of the conductor, who "lays out" the orchestration with his arrangers. Most conductors do this in a general sort of way, indicating, for example, that they wish the melody played by various sections of the orchestra in the first chorus and a series of solos for the second chorus, and the entire ensemble on the third chorus. Some conductors go so far as to dictate what each eight or sixteen measures should consist of. The difficulty of this procedure is that their arrangements are likely to sound so similar as to make for monotony.

In a final word concerning style in orchestration, I wish to state that it cannot be emphasized too strongly that the melody must always predominate. A melody may be played once by a trumpet, next by a flute, third by the entire orchestra; and although there may be many startling changes of key throughout the chorus of the arrangement, it still should be the melody as it was originally written.

PRODUCTION NUMBERS

At this point, a word should be said about the big, spectacular arrangements. These are usually of some length, running four or five minutes, as opposed to the usual two-and-a-half or three-minute arrangements; and they are of varied treatment. In other words, they usually present a tune, or several tunes, in a startling variety of treatments; for example, a double-forte passage will be followed by a triple-piano passage, a high melody by a low one, a four-four rhythm by a waltz. All these devices are designed to attract the attention of the listener.

The simplest way to do a production number, of course, is to make a medley of several tunes. However, many such arrangements have been successfully built upon a single tune.

The advantage of a production number is that it is the quickest attention getter; it is that piece on a program which makes the listener lay down his newspaper and give heed to the music. But just as the production number has advantages, so has it disadvantages. The danger lies in the fact that in an effort to be startling, the arrangement tends to become overelaborate, to lose the melody—in brief, to become boring by attaching too much importance to a tune that does not deserve it.

ARRANGEMENTS FOR THE VOCAL SOLOIST

This field of arranging is a rather specialized one, requiring a different approach from the orchestral arrangements. The introduction of the number should always set the mood of the song. For the time during which the vocalist is singing there is a basic rule, which is followed at least in part. This is to keep the accompaniment as simple as possible; for example, using only the four rhythm instruments and bringing in the rest of the orchestra at phrase ends or during a long, sustained note. Very often an obbligato or an interesting figure will accompany and support the voice.

Another very important rule for vocal arrangements is that the orchestra should play no melody except when the singer is silent. Every vocal soloist worth his or her salt will have an individual way of phrasing a song, and this cannot be duplicated in the orchestra; to have the orchestra play the melody along with the singer will only tend to produce confused phrasing.

A good vocal arrangement should, by its use of harmony and counter-melodies, support a singer; that is, it should help the singer to sing the correct note on pitch. The best vocal arrangements will also help the singer to impart the emotion of the lyrics that are being sung.

ARRANGEMENTS FOR VOCAL GROUPS

The term "vocal group," in this section, indicates a unit larger than a soloist and smaller than a full chorus. Regardless of whether they consist entirely of male or of female voices, or are mixed, such groups may be divided into two general types. One is the "legitimate" type, such as the barbershop quartet; and the other is the rhythmic group, represented by The Modernaires, The Merry Macs, etc.

In an arrangement made for the legitimate group, you will find that their voices are written in polyphony; that is, each singer follows an individual melodic line, the total effect, nevertheless, being that of a melody with harmony. An arrangement for this group would contain the same melodic lines that the individual singers follow. This enables them to find their way more easily through the confusion of harmony. The one point to be considered is that their melodic lines should not be doubled by any instrument or group of instruments that will overpower them. A soloist, as has been noted above, has an individual way of phrasing a song and for that reason, the orchestra should not contain the melody. However, in a vocal group each singer has sacrificed his or her individuality for the benefit of the ensem-

ble; so, no such problem is involved and the orchestra should double the same melodic lines that each singer follows.

An arrangement for a rhythmic group follows an entirely different set of rules. Such a group, instead of singing in polyphony, is treated more or less like a saxophone group. That is, the melody is carried by the top singer and the harmony by the supporting singers, who move in the same rhythm and direction as the melody singer. This kind of arranging is ordinarily referred to as "block" writing. The rhythmic vocal group, in an arrangement that includes one, is regarded exactly as if it were another section of the orchestra. If, for example, a rhythmic vocal group were to be accompanied by an orchestra consisting of brass, saxophones, and rhythm, the orchestration would be written as if the orchestra itself consisted of a vocal group, a brass group, a saxophone group, and a rhythm group, with the vocal group predominating, of course. The melody or the harmony is never doubled behind such a vocal group, which is accompanied by the rhythm section only, the rest of the orchestra being reserved to fill in at phrase ends and similar places.

ARRANGEMENTS FOR FULL CHORUS

Arrangements for full chorus follow the same pattern that was mentioned earlier in connection with the legitimate vocal groups; that is, each melodic line in the singers' arrangement should be exactly duplicated in the orchestra. However, since there are several singers—tenors, for example—singing the same melodic line, it is not necessary to guard so carefully against the orchestra's drowning them out. While a small vocal group should be doubled by only part of the orchestra, a full chorus can be duplicated by the full orchestra.

Occasionally, for variety and relief in a choral arrangement, all the melodic doubling in the orchestra can be dropped, leaving the singers accompanied by the rhythm group. This gives an

effect similar to an *a cappella,* or unaccompanied, choral arrangement. This cannot be done for very long at a time or the singers will lose their way.

THE MICROPHONE AND THE ORCHESTRA

It is not the province of this chapter to discuss the balance of the orchestra in relation to the microphone—to go into the control room, as it were. There are, however, a few observations to be made about the microphone in connection with radio orchestration. Many orchestral effects are possible in radio that cannot be obtained on the concert stage. For example, should such an effect be desired, it would not be impossible to have a flute play the melody in its low (or weak) register, supported by the full brass section. This would be achieved by having the flutist stand in front of a microphone, while the microphone for picking up the brass was turned off. In this connection it might be well to point out that many solos are written to be played on separate microphones. In all such cases, the soloist should not have to play for a while both before and after his solo, in order that he may have time to walk to the special microphone before beginning and then return to his seat after finishing the solo.

The brass section of a radio orchestra often uses a variety of "color" mutes, which give the instruments an unusual tone color but soften their volume. For this reason, a separate microphone is usually placed in front of the brass section, to be opened only when they are playing through their mutes. Again, time must be allowed in the orchestration for the player to insert the mute.

As was mentioned earlier, it is standard practice in a radio orchestra to use many fewer strings than would be used in a concert orchestra appearing on the stage. This also can be compensated for on the microphone. A handful of strings seated much nearer the microphone than the rest of the orchestra will have as much volume as any other section.

There are, of course, innumerable tricks performed by the use of the microphone, and most of these are arrived at by experimentation in the actual rehearsal. A few were mentioned in discussing Andre Kostelanetz's peculiarity of style; indeed, Mr. Kostelanetz is in the vanguard of this field. It is useless to attempt to enumerate these devices or to list them in any detail, since they are so much a result of experimentation.

Musical Continuity for Radio

BY DAVID HALL

Of all the various specialized types of radio script-writing, that which is used in connection with musical programs—whether popular or serious—has probably received the least attention from those concerned with the over-all problems of proper and adequate broadcast presentation. A great amount of time, effort, and money has been expended toward the end of raising to a high level of technical perfection the broadcast presentation of drama, variety, sports, and special-events programs; but, with a few exceptions, the purely musical programs on the air—especially those devoted to serious music—have been left to shift pretty much for themselves as regards the general style and quality of their presentation to the radio audience via the medium of the announcer or the program annotator. It is the object of these pages to examine the basic functions and techniques of musical continuity writing and to suggest, where practical, certain refinements that might add interest to musical programs over the air.

From a purely practical point of view, the function of the script on a musical program is to fill the time between numbers and incidentally to provide the radio audience with relevant information about the music or the performing artists being heard. At its worst, this so-called "practical" function of music script-writing becomes all too apparent to the radio listener. At its

best, we are conscious of the continuity not as an intrusion but rather as an integral part of the entire program. Here we have a situation where carefully chosen words, judiciously selected facts, simplicity and brevity of comment, and the right type of delivery by the announcer or annotator can create in the radio listener a true feeling of anticipation for the music he is about to hear. In this sense, then, a top-flight musical continuity writer has to be something of a journalist, literary and music critic, and psychologist; for it is only through complete awareness of his subject matter and the types of people who comprise his listening audience that he can produce work that is both effective and, in its own way, artistic and craftsmanlike. It is this flair for selection and synthesis, combined with the necessary knowledge of and enthusiasm for music, that provides the touchstone for the successful writing of musical continuity.

TYPES OF PROGRAMS REQUIRING MUSICAL CONTINUITY

The radio programs requiring the services of a musical continuity writer range all the way from a fifteen-minute "fill" featuring popular songs on a Hammond organ to hour-and-a-half concerts by the New York Philharmonic-Symphony or the NBC Symphony Orchestra and three-hour presentations of opera from the stage of New York's Metropolitan Opera House. In between come programs of jazz (hot and sweet); sentimental song, popular concert and symphonic works; chamber music; recitals of art song; piano, organ, or harpsichord recitals; as well as variety shows and programs featuring comments by some "personality." Each of these programs calls for a different stylistic and journalistic approach on the part of the continuity writer, depending on the nature of the music played, the performing artist, and the prospective listening audience. Thus each and every program assigned to a musical continuity writer in radio presents certain individual problems peculiar to itself—problems that cannot al-

ways be met by the use of a pat formula or a ready-made angle. It is awareness of this fact that can make possible the writer's avoiding hackneyed work, even for the seemingly most insignificant fifteen-minute "fills," and his contributing to a program of thrice-familiar "salon music" an element of freshness that will make such a quarter hour an enjoyable one for the most jaded listener.

Despite this basic individuality of each musical radio program, it is still possible—in fact, desirable—to classify the more typical of them in outline form and to indicate in a general way the style of continuity required for each. Again it should be noted that these classifications are valid for illustrative purposes only and should not be accepted as binding under all conditions.

Popular music programs. The music for these programs consists variously of current popular songs; musical-comedy favorites of the past and the present; and "jazz classics" such as "Stardust" or "Honeysuckle Rose."

The presentation may involve only a single artist at the Hammond organ or the piano; a vocal or instrumental soloist with the aforementioned accompaniment; a vocal or instrumental soloist with small or large orchestra; a small orchestra playing in predominantly "sweet" style; a large orchestra playing in the same manner; a "name" band playing in commercial "swing" style; and finally, small instrumental groups playing improvised or "hot" jazz versions of popular songs and "jazz classics."

For all these types of popular music shows the keynote for the continuity writer should be brevity and informality. In general, what is needed is not factual information about the music, but rather a phrase or two that will in a nutshell sum up its essential character and mood. In fact, this style of continuity could with justice be called "mood" continuity, by way of contrast with the factual and journalistic style common to serious music programs. In employing "mood" continuity for popular music

programs the writer's literary springboard is derived more often than not from associations of people, events, things, and places evoked by the title of a piece or the words of a song.

While "mood" continuity is, so to speak, the literary common denominator for popular music programs, the presence of a featured artist or an announcer with a gift for the delivery of comedy patter will do much in helping the writer vary his technique in handling popular music programs; for immediately there is the opportunity to use human interest material to build up the artist, or to base an entire program, using fairly fast-tempo jazz, on a line of comedy patter and repartee between the announcer and the performers. In fact, it is the use of featured artists and "personalities" on popular music programs that makes it possible for the writer to personalize his presentation to the greatest possible degree, thus giving the program a generally wider appeal for a mass listening audience. It stands to reason, of course, that the comedy line should be restricted to shows using music of the commercial and improvised "swing" type. The artist build-up can be used to good advantage on almost all popular music programs, and more often than not it provides the only method of varying one's style on shows of the more quiet and intimate type.

Occasionally the writer will be assigned a popular music program featuring improvised "jam and jive," directed to hot-jazz addicts. Recognizing the somewhat limited character of the audience listening to this type of show, the writer can afford here to give some good journalistic and human-interest slants on the performing artists, if they happen to be of the caliber of Benny Goodman, Count Basie, or Sidney Bechet; and in addition, he can feel free to resort to the use of some of the jazz terminology that might not be apropos on the mass-appeal popular music shows.

Salon music. Under this heading come most of the fifteen-

minute sustaining "fills," which employ the services of a small instrumental group, or a soloist on piano or organ—the music consisting in general of sentimental songs and familiar favorites from the works of Victor Herbert, Chaminade, etc. Occasionally there will be a featured vocalist or instrumental soloist.

Here, again, the continuity should be as brief and informal as possible, with the burden of such talk as there is favoring "mood" rather than facts. If the program happens to center around a featured artist, the writer can shift the emphasis of his continuity accordingly, thereby adding an always welcome element of variety to the announcer's commentary.

Very often, programs of the salon type will consist merely of a quarter or a half hour of uninterrupted "music to read by," in which case only an opening and a closing announcement will be needed. The opening should be as brief and to the point as possible; if any summary of the music played is necessary, this should be saved for the closing announcement.

Popular concerts. These are the half-hour and sometimes one-hour programs that make use of a good-sized concert orchestra, usually with featured soloists, the repertoire consisting of familiar selections from opera, light opera, and musical comedy; symphonic favorites, such as Ponchielli's *Dance of the Hours,* Liszt's *Second Hungarian Rhapsody,* or Mendelssohn's *Fingal's Cave Overture;* as well as the better known items from the realm of art song and sentimental song.

With these programs, the writer whose tastes lean toward art music has a little more chance to show what he can do. For while brevity is still paramount for scripts of this type, there is usually at least one musical number that can justify a thirty-second or even a forty-five second commentary, particularly if it is possible to discover an unusual human-interest or journalistic slant on the music in question.

As might be inferred from the foregoing, the general style of

continuity for popular concert programs is predominantly factual and to the point, elaboration being justified only on grounds of journalistic or human interest, associated with a given musical number or with the performing artist.

Serious music programs. The serious music programs include symphony concerts, opera presentations, chamber music, instrumental recitals, and song recitals. Recital programs vary between a quarter hour and a half hour in length. Chamber-music concerts average about a half hour, while symphony concerts may range from a half hour to an hour and a half. Operatic presentations are usually confined to an hour when they are prepared especially for radio. However, when it is broadcast directly from the stage of the opera house, such a program may last three hours or even longer.

These programs are the easiest for the writer who is biased in favor of serious music to work with; yet, in another way, they are also the most difficult, because they make the greatest demands on his capacity for selection and synthesis of raw research material. It is here that a flair for journalism, human interest, and unusual detail can be used to the greatest advantage. While the writer for a serious music program has more of an opportunity for the expansion and elaboration of his commentary, he still must make it his job to say as much as possible in the fewest possible words; for it has been shown, time and time again, that after forty-five seconds of talk over the radio, the listener's interest begins to flag. Therefore, it is only under special circumstances, such as the first performance of a new and complex musical work, that the writer can justifiably go to any considerable length in his program annotation.

In handling chamber music and recital programs directed to a limited audience of music lovers, the writer can feel free to be somewhat more erudite in his commentary than in the case of operatic and symphonic broadcasts presented to a coast-to-coast

mass listening audience. In this latter instance, it is most important that the intellectual level of the program annotation be kept within the grasp of those who "like music but don't know anything about it," at the same time avoiding assiduously any semblance of condescension or "talking down."

CONDITIONS UNDER WHICH MUSICAL CONTINUITY IS WRITTEN

The majority of continuity for musical programs over the air is written for "live" broadcast. However, a tremendous amount of recorded music is played over the air that demands the services of a continuity writer and presents certain situations that the writer is not likely to experience under other conditions.

For instance, in many smaller radio stations the person who writes the musical continuity is often charged with the preparation and building of the program. This is especially true of recorded concerts of serious music. Obviously the writer has a double advantage here; for not only can he work on the basis of direct hearings of the music and thus form his own reactions, but he has the inestimable privilege of being able to plan his musical routines around a basic idea. Thus the finished program, when handled by a skilled writer and program builder, becomes a beautifully integrated piece of work. It stands to reason, then, that versatility with respect to both writing and program building is a most valuable asset for the writer who must handle recorded-music broadcasts.

The writer for "live" music broadcasts is up against a somewhat different and more difficult situation than the record specialist. In the great majority of instances, when he is assigned a program, the writer must work from a music sheet containing musical numbers selected by others than himself. Sometimes the routine for a given program is set up in such a way that the writer can easily work out an "angle" or central theme for his script, thus making it possible for him to bring some degree of in-

tegration into the program commentary. Just as often, however, he is confronted by a program of music selected in a seemingly haphazard manner, so that he is hard put to handle the continuity in any but a fragmentary and piecemeal fashion.

The other major situation to be faced by the writer for "live" music programs is that of having to do most of his work "blind," without having any opportunity for a direct hearing of the music. The reason for this is that most sustaining musical programs are rehearsed a few hours before air time and then broadcast immediately, while most commercial musical programs require scripts in finished condition well before the first rehearsals. This means, then, that a writer for "live" music programs must have at his command an exhaustive knowledge of the entire musical literature, light and serious; adequate source material for reference, where his knowledge fails him; and above all, the ability to sense an "angle" behind a musical work and to set it down on paper briefly and effectively. Knowledge, resourcefulness, and over-all writing facility are at a premium when it comes to doing this type of continuity work.

Anyone familiar with radio knows that music writers with each and every one of the qualifications noted above are very few and far between, particularly with regard to the matter of knowledge of the musical literature. In fact, when one does encounter a "walking musical encyclopedia," it does not necessarily follow that he has the writing ability for radio work. Therefore, it is most important that the music continuity writer for "live" broadcasts should have at his disposal as many sources as possible from which he can get data and ideas of all kinds for his program commentary. This means that he must have ready access to the printed music to be played on his assigned programs. He must be able to get in touch with the production director in charge of the broadcast, in order to find out what style of commentary is desired, to say nothing of details of timing, data on

performing artists, etc. He must feel free to get in touch with performing artists and composers for first-hand information on the music and its manner of performance; for, more often than not, a five-minute telephone conversation with an artist will make all the difference between a good and an indifferent job of program annotation. Finally, the writer under ideal conditions should have at his disposal a first-class basic reference library of encyclopedias and books on serious and light music, a file of clippings and program notes on the significant musical repertoire, past and present, as well as biographical data on the major performing artists in all musical fields. This last may sound like a large order, on first glance, but where it has been carried out, it has gone a long way toward helping network staff writers to turn out a consistently high level of musical continuity at all times.

While the value of good reference material is obvious to anyone concerned with the quality of musical-program annotation for radio, a word is in order with regard to the need for close teamwork between the writer and all others concerned with the presentation of a musical broadcast. Too often the writer is handed a music sheet containing the numbers to be played and then is left to shift for himself; so that, when it comes to getting data on music, a composer, or an artist not covered by any available reference material, he must finally resort to "beating around the bush" in his finished commentary. It is at such junctures as these that a conference with the production director, the performing artist, the composer, or the music librarian can save a difficult situation. Elements of professional pride and jealousy notwithstanding, the production of a radio broadcast is a job of teamwork first, last, and always; and when problems arise in that connection, the ivory tower of professionalism offers only pitfalls and headaches, never a constructive solution. Through a close-working collaboration among music writer, production director,

performing artist, and music librarian, such situations as the constant repetition of certain items of the standard musical repertoire, haphazard planning of musical selections, and the type of unnecessarily evasive program commentary noted above could all be avoided.

PROBLEMS OF STYLE AND CONSTRUCTION

Musical continuity writing, as such, presents few if any stylistic complexities for a perceptive and technically competent writer. Indeed the essential characteristics of good music script-writing can be summed up in four words—brevity, simplicity, directness, and friendliness. Remembering that people listen to musical radio programs for the music, it never is necessary to say in three sentences what can be said well and effectively in one. Remembering that the mind of the listener must grasp the announcer's words and meanings "on the fly," words of two and three syllables, brief sentences, and simple paragraph construction are cornerstones of good script-writing. Taking into consideration limitations of time, as well as the perceptive range of the listener, mere cleverness is seldom justified in musical script-writing. Unless the situation actually demands that it be otherwise, it is more important to stick to the point when writing either serious or popular music-program commentary. Finally, and most important, the writer must remember that the material which he writes for the announcer goes into people's living rooms, that radio is essentially an intimate medium. Therefore he must "talk" to his audience in exactly the same manner that he would use among his close and respected friends, avoiding at all times the platform or "white-tie-and-tails" type of writing.

More problematical than style, per se, is the matter of proper organization and construction of scripts for musical programs. In general, the more conciseness and integration there is in a given script, the more effective it is for radio purposes. This means,

first and foremost, that the program for which continuity is to be supplied should have some sort of central idea or meaning and not be a mere haphazard collection of musical numbers thrown together for purposes of filling sustaining broadcast time. As a rule, it is the function of the radio-station or network program board to decide on the nature of musical programs and their basic purpose. Along with that goes the responsibility of selecting an apt title that will in a word, or at most three, convey to the radio listener what the program is trying to do. To title a popular jazz program "Saturday Morning Blues" and then proceed to play waltzes is obviously the height of ineptness. Yet, such things have happened in radio, time and again. To say that the script-writer in this instance is faced with an insoluble problem is to understate the case. Since the title of a radio program should in most cases be the chief point of departure in deciding the style of commentary, it is easy to see the importance of having musical content and title tailored to each other from the very outset.

Hand in hand with the matter of proper titling with music to match goes the matter of arranging the selections in an order conducive to integrated rather than piecemeal script construction. Too often a writer has worked out a clever bit of verbal transition from one musical selection to another, only to have the order changed in rehearsal, with the result that one of the elements making for a more unified radio program was destroyed. This situation, as well as many instances that are equally annoying from the writer's point of view, can usually be avoided by more careful advance planning and programming.

Important as the factors of routining, titling, and choice of artists are to script organization, the perennial factor that heads all those which the writer has to contend with is the matter of time requirements. In a program that opens and closes with a musical signature, this is not so dominant a consideration, inas-

much as the signature in question can be used as a "cushion" for upwards of a minute at each end of the show. It is in programs where no signature is used, such as on-the-spot symphony or opera broadcasts, that the time element becomes a real headache. Then, to make matters more difficult, the opening and closing announcements cannot be given in the informal fashion possible with musical-signature programs. They must, instead, fall back almost invariably on the usual "Ladies and gentlemen, we take pleasure in bringing you at this time . . . " a cliché-procedure that makes it all too easy to lapse into a lecture-platform style of commentary for the remainder of the script.

The only way to deal practically with the problem of uncertain time requirements on a musical broadcast is to follow a few simple, if rather painstaking, procedures. First of all, organize the paragraphs of commentary in such a way that they can be added to the script or subtracted from it as independent entities, making sure to keep together in at least one single paragraph the information most essential for the listener. Thus, if time is short, it will be possible for the production director to make the necessary cuts in the script without doing any irreparable damage to the program annotation, as such. In this connection, it is good policy for the writer to indicate in his script for a large-scale symphony or opera broadcast which of the sections he feels are most important and which of them he feels may be deleted if necessary. The other major consideration to be noted when constructing a script for a musical program of uncertain length is the matter of a two-minute "optional fill" at the close. This may deal with the music to be heard on the next program or may contain human-interest notes on a featured artist. In any case, the announcer then has on tap something suitable that he can use over the air, should the musical portion of the program fall short of the estimated time.

To return to the question of style in musical script writing,

there are often occasions when the writer will be assigned to do a script for a "personality," a guest speaker, or an announcer with a special gift for projecting himself to the listening audience. It is then, more than at any other time, that the opportunity arises for making radio commentary more personalized and informal than it usually is; for in that case the effectiveness of the script will depend on its delivery by the announcer or the speaker even more than on the worth of the writing itself. The best radio writing in the world will fall flat if it is not given sympathetic delivery. This very fact makes a strong argument for having a given announcer restricted to a single general type of program, particularly in the case of serious music; for, once an announcer has become associated with symphony and opera broadcasts over a period of years, it becomes possible for a writer to assume greater latitude in his program commentary without fearing repercussions from the radio audience with regard to Mr. X's musical knowledge and authority. This, of course, presumes conviction and sincerity in the announcer's delivery from the very beginning.

WHAT MAKES A GOOD MUSIC SCRIPT-WRITER?

Drawing together all the various observations made in the preceding pages, it becomes fairly plain what qualifications and aptitudes are necessary for good work in the field of musical continuity for radio.

It is obvious that one must be able to write in an easy, simple style and to turn out assignments quickly under many different conditions.

The prospective music script writer must have a thorough working knowledge of the musical repertoire, both light and serious, as well as unflagging enthusiasm when it comes to learning more about the various aspects of his subject matter.

Along with this enthusiasm and knowledge must go a consci-

entiousness that makes for insistence on the best quality of writing at all times. This means feeling that a fifteen-minute sustaining program is just as important in its own way as the two-hour symphony broadcast, and that three hours of research devoted to a script of this kind is worth while for its own sake, as long as the result proves to be good radio.

Finally, the music script writer must have a feeling for the essential teamwork involved in radio broadcasting, being willing both to cooperate and to seek cooperation from others with whom he works, toward the end of presenting good musical programs. Above all, he must not feel slighted or injured if a script to which he has devoted several days of work and research is cut to ribbons before broadcast time. For better or for worse, such things have to be done in radio, and the best that the writer can do in such a situation is to take some personal measure of satisfaction in having done a good job to begin with, and to hope for a later opportunity when he may be able to use the same material under more advantageous conditions.

Music Rights in Radio

BY THOMAS H. BELVISO

How many measures of a copyrighted composition may be broadcast without the permission of the copyright owner? Without such permission how many measures of a copyrighted piece of music may another composer incorporate in his own work? May new lyrics be set to a copyrighted song without proper consent? Does the purchase of a copy or selection of a copyrighted work give the buyer the right to broadcast it without obtaining that right from the copyright owner?

These are some of the questions to which it is necessary to have the answers when dealing with the subject of copyright as related to the use of music in radio. Therefore, in this chapter, we shall endeavor to answer these and other questions, and at the same time to give to the student, in as simple a form as possible, a broad and general idea of a rather complicated subject, upon which volumes have been written.

The music used in radio broadcasting falls into three general categories:

1. Works in the public domain.
2. Works protected by statutory copyright.
3. Unpublished works protected by common law.

Each one of these three will be discussed in turn, with an ex-

planation of the status of each and of the regulations covering their use.

WORKS IN THE PUBLIC DOMAIN

Published musical works which, for one of a number of reasons, have never been copyrighted; those that have not been properly copyrighted; and those on which the copyright has expired are in the public domain. That is, they have been dedicated to the public and may be used freely and without fear of copyright infringement. The original publications of many of the great composers—Bach, Beethoven, Wagner, Tchaikovsky, Mozart, Handel, and Haydn, to name a few—are in the public domain in the United States. These works fall into the class of those which have never been copyrighted in the United States; the reason for this will be explained later.

There is, however, one difficulty in connection with public-domain music, and that lies in the question of the edition or arrangement contemplated for use. Under the provisions of Section 6 of the Copyright Laws of the United States of America,[1] adaptations, arrangements, translations, or other versions of works in the public domain may be copyrighted and registered as new works, and would enjoy full copyright protection. So, it is well to bear in mind that, while many millions of musical works are basically in the public domain, they are not readily available in their original unprotected versions.

WORKS PROTECTED BY STATUTORY COPYRIGHT

Musical works that may be protected under the Copyright Law of the United States of America fall into two general classifications:

[1] Bulletin 14 containing Copyright Law of the United States of America may be secured from the Superintendent of Documents, Washington, D. C.

1. Musical compositions.
2. Dramatico-musical compositions.

Musical compositions include songs; instrumental compositions; separately published vocal numbers from operas, operettas, and musical comedies when not intended to be acted; adaptions; and arrangements. Dramatico-musical compositions consist principally of productions conceived to be acted as well as sung, such as operas, operettas, musical comedies, and similar works.

The Copyright Law of the United States of America, among other things, gives to the owner of a copyrighted work the exclusive right to print, reprint, publish, copy, or vend; to translate or make other versions of it; to dramatize it if it is a non-dramatic work; to arrange or adapt it if it is a musical work; to publicly perform it if it is a dramatico-musical composition; and to publicly perform it for profit if the work is a musical composition.

The violation of any of these exclusive rights would constitute an infringement of copyright. Section 25 of the law provides, in part:

"That if any person shall infringe the copyright in any work protected under the Copyright laws of the United States such person shall be liable:

a. To an injunction restraining such infringement;

b. To pay to the copyright proprietor such damages as the copyright proprietor may have suffered due to the infringement, as well as all the profits which the infringer shall have made from such infringement—or in lieu of actual damages and profits, such damages as to the Court shall appear to be just, and in assessing such damages the Court may, in its discretion, allow the amounts as hereinafter stated—such damages shall not exceed the sum of five thousand dollars nor be less than two hundred and fifty dollars, and shall not be regarded as a penalty."

Further, Section 28 of the same law provides:

"That any person who wilfully and for profit shall infringe any copyright secured by this Act, or who shall knowingly and wilfully aid or abet such infringement, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by imprisonment for not exceeding one year or by a fine of not less than one hundred dollars nor more than one thousand dollars, or both, in the discretion of the Court; *provided, however* that nothing in this Act shall be so construed as to prevent the performance of religious or secular works, such as oratorios, cantatas, masses or octavo choruses by public schools, church choirs, or vocal societies, rented, borrowed, or obtained from some public library, public school, church choir, school choir, or vocal society, provided the performance is given for charitable or educational purposes and not for profit."

The law makes an important distinction between dramatico-musical compositions and musical compositions. With respect to dramatico-musical compositions, the copyright owner has the *exclusive right to perform publicly,* whether or not for profit. This means that no one may present a public performance, for any purpose whatsoever, of an opera, operetta, musical comedy, or similar work, without the permission of the copyright owner. As to what are termed "musical compositions," the copyright owner has the *exclusive right to public performance for profit.* Anyone may perform a musical composition privately or publicly without the permission of the copyright owner, provided that the performance is not for profit.

The courts have held in a number of cases that performances by radio broadcast are public and for profit. Since performances by radio are public, copyrighted operas, operettas, etc., should not be broadcast without a license and since a radio performance is also for profit, musical compositions likewise should not be broadcast without a license from the copyright owner. To do

so, in either case, would be to invite a suit for copyright infringement.

Popular misconception. From time to time it is contended by composers, performers, radio executives, publishers, and others that it is legal to use four or eight measures of a copyrighted work without permission. *This contention is wholly erroneous.* A composer may not appropriate any substantial part of another's copyrighted work without infringing. Any recognizable portion of a copyrighted tune, broadcast without the consent of the owner, might be an infringement of his rights. The portion broadcast might consist of only a few measures or even a few notes, but if the fragment is recognized as belonging to a particular copyrighted work and no other; then the infringement might exist. Let us take an example to illustrate this point.

The familiar melodic strain in George Gershwin's *Rhapsody in Blue* has been since its first performance, as everyone knows, particularly associated with the music of Paul Whiteman. The rhapsody was given its initial public performance by Mr. Whiteman, and for many years he has used the particular melodic strain of which we speak as an introduction to his performances, whether in the theater or on the radio, and no one ever hesitates to identify this fragment as a part of the *Rhapsody in Blue.* Ordinarily a rather generous and easily recognizable portion of the selection is used. However, a situation could arise in which Mr. Whiteman's performance might be introduced by only the first four notes of this melody, played by a single instrument. Now, undoubtedly, these four notes, in just such sequence, could be found in any one of a number of public-domain sources; but, when they are associated with a performance by Paul Whiteman, it would be ridiculous to attempt to construe them as coming from any other work than the *Rhapsody in Blue.* It would, therefore, be very unwise to permit such a performance without first securing a license to do so from the copyright owner or his agent.

A number of years ago, the musical composition "I Hear You Calling Me" was enjoying a considerable amount of popularity, especially through the concerts of John McCormack, the famous Irish tenor. Another song, entitled "Tennessee, I Hear You Calling Me," suddenly began to be popular through the efforts of Al Jolson and other singers of his type. The compositions are quite different in style, with the exception of a two-measure phrase with the words "I hear you calling me." The phrase appears several times in the song "Tennessee, I Hear You Calling Me," accompanied each time by six notes which, while not identical, are very similar to those used to accompany the same words in the other composition. A suit was instituted by Chas. T. Boosey and his associates, copyright owner of "I Hear You Calling Me," against Empire Music Co., publishers of "Tennessee, I Hear You Calling Me," alleging infringement of copyright. The court held that "I Hear You Calling Me" had been infringed.[1]

This judgment in which *six notes,* not in themselves identical, but tied up with an identical text, constituted an infringement *would most certainly* refute the mistaken belief that it would be legal to use as many as four to eight measures without the consent of the copyright owner.

Rights of the copyright owner. Translations and the making of other versions of his work are among the exclusive rights of the copyright owner. Changed lyrics and parodies of copyrighted works made without the required authority may not be broadcast without running a risk of infringement.

The holder of the copyright, as has been previously mentioned, acquires a number of exclusive rights, among which is the right to "publish and vend." The fact that he may publish and sell copies of his work does not alter his *exclusive* right to perform that work publicly if it is a dramatico-musical composition, or

[1] *Boosey et al. v. Empire Music Co., Inc.,* District Court, S. D. New York, Feb. 11, 1915—224 Fed. 646.

publicly for profit, if it is a musical composition. The purchase of a piece of copyrighted music does not give these rights to the buyer and, if the buyer desires to perform the purchased work publicly, in the case of a dramatico-musical work, or publicly for profit if it is a musical composition, he can do so *only with the express consent of the copyright owner or his agent.*

The right to record his work is also enjoyed by the proprietor of a copyright, under certain conditions.[1] Recording rights exist only in compositions published and copyrighted after July 1, 1909, and do not include the works of foreign authors or composers, unless the foreign countries of which these authors or composers are citizens or subjects grant similar rights to citizens of the United States.

Whenever the owner of the copyright on a musical composition has himself made a recording of his copyrighted work or has permitted another person to do so, then anyone may make a similar recording upon payment to the copyright proprietor of a royalty of two cents on each record manufactured.

There are several other formalities that must be observed in connection with the making of recordings under the statutory licensing provisions of Section 1*e* of the Copyright Law. To mention a few, there is an obligation on the part of the manufacturer to furnish to the copyright owner, within a specified time, a report of the number of records manufactured by them. There is also an obligation on the part of the copyright owner to file notice with the Copyright Office in Washington,[2] whenever he, himself, has recorded a composition, or has permitted another to do so.

Persons entitled to copyright. The privilege of obtaining copyright in the United States is granted to the following:

[1] This is fully covered in Section 1*e* of the Copyright Laws of the United States of America.

[2] Fee required for filing of this notice specified in Section 61 of the Copyright Law of the United States of America.

1. An author or composer of a work who is a citizen of the United States.
2. An alien author or composer who is domiciled in the United States when his work is first published.
3. Citizens or subjects of foreign states or nations which grant to citizens of the United States copyright benefits on substantially the same basis as to their own citizens.

Reciprocal agreements. This exchange of copyright privileges between the United States and foreign countries (as noted in Paragraph 3 above) is created by law or granted either by treaty or convention, generally called reciprocal agreements, and the existence of the reciprocal conditions is determined by proclamation of the President of the United States. Proclamations in existence at the present time extend the privilege of copyright protection to citizens of practically every country of any importance in the world.

The dates of the establishment of reciprocal agreements with foreign countries vary, and in this connection, it might be well to refer back to the section, Works in the Public Domain. You will note that in the first paragraph of that section we stated that the works of Bach, Beethoven, Wagner, Tchaikovsky, Mozart, Handel, and Haydn, etc., are in the public domain in the United States. In the case of these seven composers, as is the case with many others, their works had all been published and the great men had died long before reciprocal agreements were established under which their compositions could be copyrighted.

As a matter of fact, reciprocal agreements are still nonexistent between the United States and Russia; and Tchaikovsky, if he were still living, and living in Russia as a Russian citizen, would not be able to copyright his works in the United States.

Copyright notice. The works of persons entitled to copyright quite often fall into the public domain for a number of rea-

sons, one of the most striking of which is that the works must carry a proper copyright notice. The notice required consists of the word "Copyright," accompanied by the name of the copyright owner and the year that the copyright was granted. For example, "Copyright 19— by John Brown."

A work published or printed in the United States that is put on sale or made generally available to the public, and that does not carry a proper notice, falls immediately into the public domain.

While the Copyright Law specifically provides that works to be protected in the United States must carry a proper copyright notice, there are several exceptions that might cause confusion and, therefore, should be mentioned.

Quite often, what is generally referred to as a "pirated" reprint of a copyright piece makes its appearance on the market. Such copies are for the most part printed in foreign countries, carry no copyright notice, and usually bear the imprint of a publisher other than the original. Publications such as these, made without the consent of the true copyright owner, do not cause the original copyrighted piece to fall into the public domain, and a performance made from one of these pirated publications would expose the user to copyright infringement if he failed to have a license from the legitimate owner of the copyright.

The United States has established reciprocal copyright agreements with most of the South American countries. The agreements with a few of these countries clearly indicate that the publications of the works of the citizens of these countries, in order that they may enjoy copyright protection in this country, must carry the regulation United States copyright notice. However, with respect to the remaining South American countries, the only notice requirement seems to be that a statement shall appear on the work indicating the reservation of the property right.

Whether or not a mere statement to the effect that the rights in a particular South American work are reserved is sufficient to protect the work by copyright in this country is a controversial point, which some day will most likely be settled.

Life of copyright. The life of a copyright in the United States endures for twenty-eight years, and may be renewed during the twenty-eighth year, when the copyright may be extended for another twenty-eight years. If, however, the copyright is not renewed, the work falls into the public domain. If, on the other hand, the renewal privilege is exercised and the copyright is thereby extended for another twenty-eight years, it may not again be extended; then, at the end of the fifty-sixth year, the work will automatically and forever fall into the public domain.

UNPUBLISHED WORKS PROTECTED BY COMMON LAW

As soon as a musical work is conceived, the author acquires what are known as "common-law" rights, and these rights continue in force until the work is published. There are advantages as well as disadvantages in protection under the common law. Common-law rights in a musical composition endure indefinitely, so long as the work remains unpublished. The owner of such rights may authorize or restrict performances. Common-law rights are protectable under state laws, and the extent of these rights depends on the laws of each state. A work protected by the common law should not be broadcast without a license from the owner.

In the foregoing paragraphs we have dealt with the subject of music used in radio, the copyright laws governing its proper use, and the performing rights that must necessarily be secured before this music is broadcast. Now we shall proceed to a discussion of the sources from which these performing rights may be secured and some of the difficulties encountered in the process of clearing performing rights for radio.

PERFORMING RIGHTS SOURCES

Public performing rights in music, the rights with which we are primarily concerned in broadcasting, are controlled through a number of sources:

1. Licensing organizations.
2. Independent agents.
3. Publishers.
4. Composers.

Licensing organizations. The principal licensing organizations in the United States are

1. American Society of Composers, Authors and Publishers (Ascap).
2. Broadcast Music, Inc. (BMI).
3. Associated Music Publishers, Inc. (AMP).
4. Sesac, Inc. (Sesac).

Ascap. Ascap was founded in 1914 and organized as an unincorporated association of composers, authors, and publishers of music, and lists as its members hundreds of individuals and organizations occupied in the field of music composition and publication in this country.

The publisher who has been accepted to membership in this organization agrees to assign to Ascap the *exclusive right to license the nondramatic performing rights* in all the compositions he has acquired or may acquire.

The author or composer who has been accepted to membership assigns to Ascap the *exclusive right to license the nondramatic rights* in all the compositions he owns at the time of his acceptance to membership, as well as all the music he thereafter shall create.

Ascap acts as agent for many foreign licensing societies and,

under its agreements with these foreign organizations, it controls exclusively the licensing of the nondramatic rights in the majority of their compositions.

Ascap offers licenses of two general types to radio stations:

1. Blanket licenses.
2. Per program licenses.

Under the blanket licenses, radio stations obtain the nonexclusive right to present, during any of their programs, nondramatic broadcast renditions of the musical compositions controlled by the society. Under a per program license, a radio station obtains the nonexclusive right to present nondramatic renditions of Ascap-controlled music in specific programs.

You will note particularly, that the licenses are limited to *nondramatic* renditions. The right to dramatize a nondramatic work must be secured from the copyright owner or from whoever controls these rights. It is difficult to determine what constitutes a dramatization of a nondramatic composition. The decisions on this point leave much to be desired, so we have to rely on our best judgment. However, if, on a program, you develop a plot and tie it together with copyrighted songs the text of which has the effect of carrying the action forward, then watch out—you may be getting into a dramatization.

The repertoire of Ascap contains a very large assortment of music. Every conceivable type of composition is represented, including popular and standard songs; selections from operas, operettas, and musical comedies; religious, college, symphonic, and miscellaneous other music.

Broadcast Music, Inc. (BMI). In 1939, the broadcasters became involved in a controversy with Ascap over the renewal of agreements between them that had until the end of 1940 to run. The negotiations between the broadcasters and Ascap reached a point where it appeared to the broadcasters that they might not

succeed in concluding a satisfactory contract with Ascap. As a result, they would find themselves hard put to secure acceptable music, available in sufficient quantities to take care of their needs.

Accordingly, the broadcasters decided that they would better take steps to prepare themselves to meet such an emergency. Among other things, it was proposed that they pledge an amount equal to 50 per cent of the fees that they paid to Ascap in 1937, this fund to be used for the purpose of establishing a new reservoir of music for radio. It was estimated that the pledged total would amount to about one and a half million dollars.

A corporation was formed, and proceedings went forward to build an organization and put it into operation. By the time the expected emergency arrived, BMI was well established as a publishing and licensing organization.

Like Ascap it acts as a licensing agent of nondramatic renditions of musical compositions for a sizable number of publishers. It also has agreements with some South American performing-rights societies, under which it represents the performing rights controlled by them.

Unlike Ascap, BMI has published, copyrighted, and distributed a large number of musical compositions.

Associated Music Publishers, Inc. (AMP). AMP claims to license 18,000 copyrighted musical works. At the present time, approximately fifty music publishers, with certain exceptions, license their performing rights for radio through this organization. While the AMP repertoire includes musical works of various types, the symphonic music contained therein is generally considered the most important part. In addition to being a licensing organization, AMP is also engaged in the publishing business and has issued a number of compositions in its own name.

Sesac. Sesac was organized about fifteen years ago. It controls the performing rights of a number of publishing houses in the United States, as well as those of some publishers located in

foreign countries. At various times it has claimed to represent copyrighted musical compositions ranging in number from 40,000 to 100,000. The catalogues of the publishers affiliated with Sesac at the present time include works that fall into a number of general classes, principally religious and standard songs, light and symphonic instrumental pieces, marches, and hill-billy and cowboy songs.

Independent agents, publishers, and composers. A large number of publishers and composers are not affiliated with any of the existing licensing organizations. Therefore, anyone who wishes to perform the works controlled by these independents must deal directly with them. The major licensing organizations restrict the use of the compositions contained in their catalogues to nondramatic renditions; therefore, any contemplated translations, new versions, dramatizations of nondramatic works, and any other uses that are the exclusive right of the copyright owner must be negotiated with him or with whoever represents the particular rights involved.

In the case of translations, new versions, parodies, reprints of music and/or of lyrics, and dramatization of songs, the rights usually may be negotiated directly with the publishers. Recording or mechanical rights are, in some instances, handled directly by the publishers, and in others with organizations specializing in mechanical rights.

Copyright dramatic works, such as operas, operettas, musical comedies, and similar works, are usually negotiated directly with the owners or through independent agents. In most cases, the ownership of dramatic works is held by several persons. This joint ownership, which differs considerably in the case of most dramatic works, often complicates the clearance of such works, and each contemplated broadcast must be negotiated separately.

CLEARANCE OF MUSIC FOR RADIO AND PROBLEMS INVOLVED

Clearing the rights in music for radio is not a simple, routine matter of knowing the Copyright Law of the United States of America, the rights enjoyed under this act by copyright owners, their common-law rights, and the sources from which the license to perform the works of these copyright owners may be obtained. Determining the exact status of a piece of music from the standpoint of performance for radio is often difficult and should, whenever possible, be entrusted to experts.

There are many people, including some radio executives who should know better, who believe that determining the status of a musical work may be accomplished by the elementary procedure of checking the published music in question for copyright notice. They believe that if the music bears the copyright notice of a publisher whose works are licensed direct or through one of the licensing organizations, then the conclusion is that they are properly licensed to broadcast the work thus analyzed.

This conclusion is far from being entirely correct, as you will learn later. In defense of some of those who follow this reasoning, it should be mentioned that they have been encouraged in this erroneous thinking through brochures and publicity issued by some of the copyright licensing organizations, as well as by careless statements made by some of their employees.

You will recall that we mentioned that a copyright endures for a period of twenty-eight years, and, during the twenty-eighth year, may be renewed, with the copyright extended for another twenty-eight years, making a maximum fifty-six-year period during which a work may be protected in this country. Sections 23 and 24 of the Copyright Law provide:

(Sec. 23) "That the copyright secured by this Act shall endure for twenty-eight years from the date of first publication, whether the copyrighted work bears the author's true name or is

published anonymously or under an assumed name: *Provided,* that in the case of any posthumous work or of any periodical, cyclopaedic, or other composite work upon which the copyright was originally secured by the proprietor thereof, or of any work copyrighted by a corporate body (otherwise than as assignee or licensee of the individual author) or by an employer for whom such work is made for hire, the proprietor of such copyright shall be entitled to a renewal and extension of the copyright in such work for the further term of twenty-eight years when application for such renewal and extension shall have been made to the copyright office and duly registered therein within one year prior to the expiration of the original term of copyright: *And provided further,* That in the case of any other copyrighted work, including a contribution by an individual author to a periodical or to a cyclopaedic or other composite work, the author of such work, if still living, or the widow, widower, or children of the author, if the author be not living, or if such author, widow, widower, or children be not living, then the author's executors, or in the absence of a will, his next of kin shall be entitled to a renewal and extension of the copyright in such work for a further term of twenty-eight years when application for such renewal and extension shall have been made to the copyright office and duly registered therein within one year prior to the expiration of the original term of copyright: *And provided further,* That in default of the registration of such application for renewal and extension, the copyright in any work shall determine at the expiration of twenty-eight years from first publication."

(Sec. 24) "That the copyright subsisting in any work on July 1, 1909, may, at the expiration of the term provided for under existing law, be renewed and extended by the author of such work if still living, or the widow, widower, or children of the author, if the author be not living, or if such author, widow, widower, or children be not living, then by the author's executors,

or in the absence of a will, his next of kin, for a further period such that the entire term shall be equal to that secured by this Act, including the renewal period: *Provided, however,* That if the work be a composite work upon which copyright was originally secured by the proprietor thereof, then such proprietor shall be entitled to the privilege of renewal and extension granted under this section: *Provided,* That application for such renewal and extension shall be made to the copyright office and duly registered therein within one year prior to the expiration of the existing term."

Section 62 of the Copyright Law provides:

"That in the interpretation and construction of this Act 'the date of publication' shall in the case of a work of which copies are reproduced for sale or distribution be held to be the earliest date when copies of the first authorized edition were placed on sale, sold, or publicly distributed by the proprietor of the copyright or under his authority, and the word "author" shall include an employer in the case of works made for hire."

You will note that Sections 23 and 24 specifically provide that the copyright in any work may be renewed and extended by

1. The author, if living.
2. The widow, widower, or children of the author, if the author is not living.
3. The author's executors, if there is a will.
4. The next of kin, in the absence of a will.
5. The proprietor at the time of renewal, in the case of any work copyrighted by an employer for whom such work was made for hire.

The provisions contained in these sections of the Law clearly indicate that, with the exception of a work copyrighted by an employer for whom such work was made for hire, the rights in a musical work revert back to the author at the end of the first

twenty-eight-year period. If the author or authors are living, they and only they have the privilege of renewing the copyright; and if they are not living, the copyright may be renewed by the heirs of the authors in order and under the conditions outlined above in 1, 2, 3, and 4.

These provisions have a very important bearing in determining the correct status of a copyright. For example, a piece of music published and copyrighted in 1915 would have imprinted thereon the notice of copyright ownership. If the owner of this copyright was affiliated with Ascap in 1915 and continued the affiliation up to the present, and if, during the period from 1915 through 1943, he retained ownership in this copyright (that is, did not assign it to another), the rights to perform it nondramatically would be held and licensed by Ascap; that is, through 1943. Whether or not Ascap would continue to license the composition after 1943 would depend on a number of circumstances.

If the copyright is not properly renewed by the author or his heirs, then, as has been stated, the work falls into the public domain and may be used by anyone. However, if it is renewed, one of a number of things might happen to the performing rights.

The author, if living, or if he is not living, whoever is entitled thereto, may decide to retain the renewal right and all the benefits derived therefrom; or, he may decide to reassign the copyright (which, in the case of a renewal, is really a new right) to the original publisher; or, he may prefer to assign the renewal to a publisher affiliate of Sesac, for instance, or to BMI, or to an independent publisher.

If, however, the author happens to be a member of Ascap when he renews the copyright, then the performing rights in his work would automatically fall into the Ascap repertoire by virtue of the Ascap membership agreement. This agreement, as we have noted, stipulates that members agree that during the term of their membership the exclusive right of public performance in

all compositions written, composed, acquired, owned, published, or copyrighted by them shall vest in Ascap, and any assignment that the author may make of his work after the renewal of copyright would be subject to Ascap's prior rights.

If he is not an Ascap member, then he may, upon renewal and extension of copyright of any given work, assign the performing rights in it to anyone.

It, therefore, becomes obvious from this, that the copyright notice imprinted on a piece of music is not the complete answer to determining the status of a copyright. Actually, the status of a piece of music could change a number of times with no indication of such changes on the music. Notices of assignments and renewal are often printed on music, but they would not be very helpful in the case of a copy published before the changes took place.

There are many examples where the copyright notice fails to give the correct answer as to who or what organization represents the performing rights. All the performing-rights organizations, from time to time, issue lists of composers, authors, publishers, and foreign societies whose works they purport to license, and partial lists of compositions that they license. The names of certain composers and publishers appear in the membership lists of several licensing bodies. This helps to complicate the clearing of performing rights.

For instance, at the present time, *symphonic* renditions of *Pomp and Circumstance,* by Sir Edward Elgar, are licensed through AMP, while those renditions made for small orchestras are licensed through Ascap. This is due to the exclusion of "symphonic" works from the contract that is in effect between Ascap and The Performing Right Society, Limited, of London, England. You will see from this that constant vigilance would have to be exercised in determining the status of renditions of this number, since the copyright notice of the publisher does not help

in ascertaining from which licensing organization particular rights are secured.

The problems involved in the clearing of rights are manifold, and all persons directly entrusted with the responsibility of presenting music by radio should be made aware of the complications that might arise out of an unlicensed broadcast.

Not even *one measure* of a copyrighted piece of music should be played over the air until there is absolutely no question as to the legality of its performance.

Musicology and Radio

BY GILBERT CHASE

To determine what musicology is must be our first concern, and the next will be to ascertain what connection it has with radio. The word "musicology" will not be found in standard dictionaries. This would indicate that it is one of those newly coined words with which the dictionaries, always inclined toward conservatism, have not yet caught up. Yet the two-volume dictionary that is on my desk includes the term "swing-music"—surely of more recent coinage than "musicology." In unabridged dictionaries one finds the term "musicography," but that is irrelevant to the present subject, since it refers to the writing of musical notes, being formed by analogy with the word "calligraphy." For definitions of musicology one must turn to special sources, such as musical dictionaries and encyclopedias, and to the writings of the musicologists themselves. Since it is a truism that authorities differ, we must not expect to find a unanimity of opinion even among the experts. Let us take first a definition that is not only extremely comprehensive but that also has the weight of considerable authority, as it comes from Dr. Otto Kinkeldey, past president of the American Musicological Society and, since 1930, Professor of Musicology at Cornell University: "Musicology, a word formed by analogy with philology, theology, psychology or biology, is used to designate the whole body of systematized knowledge about music, which results from the application of

scientific methods of investigation or research, or of philosophical speculation and rational systematization to the facts, the processes and the development of musical art, and to the relation of man in general (or even of animals) to that art."

This definition appears to be an elaboration of Dr. Waldo Selden Pratt's dictum that "Musicology must include every conceivable discussion of musical topics." This conception is also embodied in the definition of Dr. Paul Henry Láng, of Columbia University, who writes: "Musicology unites in its domain all the sciences which deal with the production, appearance and application of the physical phenomenon called sound." Note that, whereas Dr. Kinkeldey speaks of "musical art," Dr. Láng speaks of the "physical phenomenon of sound," which immeasurably widens the scope of his definition. The implication here is that the entire field of acoustics and all aspects of engineering as they are concerned with the production or control of sound come within the realm of musicology. If this interpretation were accepted, it is obvious that musicology would be vitally involved in the whole field of radio broadcasting, which is concerned with the transmission of sound and with the scientific manipulation of sound to achieve the maximum fidelity in transmission and reception. Yet I am not aware that any radio engineers or production directors are members of the American Musicological Society. We are forced to the conclusion that Dr. Láng's definition covers too much territory by attempting to embrace *all* the sciences that deal with the production of sound. Certainly, musicology cannot overlook the realm of acoustics, but it can limit its preoccupation to those aspects of acoustics that concern "the processes and the development of *musical art.*"

Let us look now at one more definition of musicology, formulated by Dr. Glen Haydon, of the University of North Carolina: "Musicology is that branch of learning which concerns the discovery and systematization of knowledge concerning music." Dr.

Haydon has devoted an entire book to the subject of musicology, which he divides into two main phases: I. Systematic Musicology; II. Historical Musicology. The former he subdivides under the following headings:

1. Acoustics (analysis of the physical nature of music).
2. Psychophysiology (music as a phase of behavior).
3. Aesthetics (the artistic values in music).
4. Pedagogy (problems of music education).
5. Anthropology (music as an element in the socio-cultural backgrounds of the various peoples of the world).

Of these five subdivisions, it is obvious that the only one that has a clear-cut relation to radio is acoustics. This takes us into the realm of physical science and is, in itself, such a vast and complex aspect of radio broadcasting that it must be regarded as a separate subject if it is to be discussed at all. I shall not attempt to go into that aspect here, but various acoustical problems as they relate to radio broadcasting have been touched upon in the course of these lectures, notably those of Mr. Dunham on the production of musical programs. Insofar as the broadcasting of educational programs is concerned, musical pedagogy might be regarded as related to radio; but, at least with respect to network operations, this is a relatively minor phase at present. It will doubtless increase in importance with the development of FM educational broadcasting.

HISTORICAL MUSICOLOGY

As the name indicates, historical musicology is concerned with historical research in the field of music. There are, obviously, many directions that this research may take. It may concentrate on the interpretation of early musical notation; it may deal with problems of actual performance or musical interpretation; it may study the development of musical instruments; it may analyze

the theory of music; it may trace the evolution of musical forms; it may devote itself to the field of musical biography; and so forth. Whatever direction is taken, the aim is always to increase our knowledge of music by scientific methods of investigation. There is a tendency in some quarters to limit the scope of musicology to its historical aspects. Whatever the theory, it is a fact that in actual practice the vast majority of musicologists direct their major efforts to historical investigation. Many of them are engaged in teaching various aspects of music, but the work that they produce as musicologists is generally directed toward casting additional light on obscure details of musical history. For this reason, I offer what I think is a practical definition of musicology in its present status: "Musicology is the science of musical research, with special emphasis on historical investigation."

Much water has flowed under the bridge since 1917, when the head of the music department of a prominent American university wrote to one of our pioneer musicologists, saying, "Our faculty has discussed musicology and we do not think much of it." Today the value of musicology is widely recognized among American universities and, even when they do not actually teach musicology, it is regarded as a source of prestige to have a prominent musicologist on the faculty. American musicology has made an impressive record during the past fifty years. A remarkable pioneer in this field was Oscar G. Sonneck (1837–1928), who became first chief of the music division in the Library of Congress and who published a series of extremely valuable monographs on early American music. In 1929 the American Council of Learned Societies established a Committee on Musicology, which is still active. In 1930 the New York Musicological Society was formed; four years later it was merged with the American Musicological Society, a national organization, which now has chapters in all sections of the country. In 1939 this society sponsored an International Congress of Musicology, the first to

be held in the United States. These are some of the high lights in the growth of American musicology.

MUSICOLOGY IN RADIO

Radio has long recognized what might be called the purely utilitarian aspects of musicology, even though the term itself is still relatively unfamiliar in broadcasting circles. Music, as Mr. Chotzinoff has reminded us, is a major staple of radio and, where music is continually and systematically used, there is need for musicology, whether or not it be known by that name. Actually, "musical research" is the term generally employed by those broadcasting stations that include this type of work in their organization. What it amounts to in actual practice is a "department of musical information," because that is the main purpose for which it exists. Information on musical subjects is supplied both to members of the staff and to outsiders who may—and very often do—write in for all kinds of odd musical information. The National Broadcasting Company has for many years employed persons entrusted with the task of gathering and dispensing musical information. A music research specialist is placed under the script division, a recognition of the fact that those most in need of this information are the writers who turn out continuity for musical programs. A very extensive clipping file, in addition to a basic musical reference library, constitute the main resources of this musical research department at NBC.

While the utility of this service should be recognized, it must be pointed out that musicology, properly speaking, begins where "musical information" leaves off. When you go to the information desk at a railroad station, you naturally expect to learn when the next train leaves for Albany or Philadelphia; but you cannot expect to find out when the first railroad was built in the United States, what relation railroads have to industrial expansion, or what is the approximate yearly tonnage of freight carried

by our railroads. Similarly, a department of musical information will tell you the dates of Beethoven's birth and death, and how many symphonies Mozart wrote. If, however, you wish an opinion as to the authenticity of certain works attributed to Mozart or as to the approximate date of the early English canon, "Sumer Is Icumen-in," then you must turn to musicology, since these are matters that can be determined only by scientific investigation. By and large, radio can get along with the basic minimum of musical information, because the majority of radio programs do not venture far from the beaten path, and people concerned with their production therefore have seldom any fear of being caught beyond their depth. But occasionally a radio series may call for exceptional musical resources and for special knowledge coming within the domain of musicology. A case in point is the music series of NBC's University of the Air, inaugurated in 1942. A plan for tracing the development of music in the Americas was submitted by Dr. Carleton Sprague Smith, Chief of the Music Division of the New York Library and past president of the American Musicological Society. The plan was then further elaborated and worked out for broadcast presentation by Mr. Ernest La Prade, Mr. John Tasker Howard, the well-known historian of American music, and myself (I was engaged primarily in my capacity of Latin American specialist). The series worked out by this musicological team was called "Music of the New World" and resulted in a three-year cycle of 110 broadcasts depicting every phase of music in the Western Hemisphere, from the Empire of the Incas to Tin Pan Alley.

For preparing a series of this kind, a solid musicological background is indispensable. Anyone undertaking such a task must have a good knowledge of heuristic procedure, which is the musicological equivalent of the journalistic "nose for news" (it comes from the Greek *heurisko,* "to find out"). As outlined by

Dr. Haydon, the musical research worker must have an inquiring mind; he must know how to define the problem or subject under investigation; and he must know how to limit the subject as regards time and material available. The same principles can be applied to the field of program planning in radio. Stated in plain language, it means simply that the program planner must have a clear conception of what he is trying to do, and must be sure that all the necessary means are available to carry out his idea. Many people submit interesting ideas that are not practical, or practical ideas that are not interesting. Of course, an experienced radio person can often take an interesting idea and make it practical for broadcasting by adapting it to the exigencies of the medium; but if the ideas are radio-wise to begin with, he has a head start.

BIBLIOGRAPHY, THE CORNERSTONE OF RESEARCH

Nobody can know everything that there is to know on any particular subject. The most one can hope to achieve is to be acquainted with all the sources of information. In musicology, for instance, we take for granted familiarity with all the standard musical reference works such as *Grove's Dictionary of Music and Musicians, Baker's Biographical Dictionary,* the *Harvard Dictionary of Music,* etc. These works, in turn, contain specialized bibliographies, which can be consulted by those who need more detailed information on any subject. Musical bibliography may be divided broadly into two fields: (1) books dealing with music; (2) music (published and unpublished). A brief survey of both follows:

1. *Books dealing with music*

a. General reference works (dictionaries, encyclopedias, histories). Standard works in this field include

Grove's Dictionary of Music and Musicians, 3d ed., 5 vols. and Supplementary Volume (The Macmillan Company, New York, 1935–42).

Baker's Biographical Dictionary of Musicians, 4th ed. (G. Schirmer, Inc., New York, 1939).

International Cyclopedia of Music and Musicians, edited by Oscar Thompson, rev. ed. (Dodd, Mead & Company, Inc., New York, 1943).

The Oxford Companion to Music, edited by Percy Scholes (Oxford University Press, New York, 1942).

Harvard Dictionary of Music, edited by Willi Apel (Harvard University Press, Cambridge, Mass., 1945).

The Oxford History of Music, 2d ed., 7 vols. (Oxford University Press, New York 1929–1938).

b. Specialized works (books on music in individual countries, biographies of musicians, works dealing with one phase of music, such as opera, oratorio, symphony, etc.)

This field is too vast to permit the listing of specific bibliographical references here. Consult the general bibliography in Thompson's *Cyclopedia,* mentioned above.

c. Monographs (scientific studies of one subject or one phase of a subject). The difference between a monograph and a history or biography is that a monograph is strictly scientific, concerned exclusively with the presentation of data, while a biography may be more concerned with literary, artistic, and "human" interest, and a history deals with critical interpretation in a broad field. Examples of musical monographs are O. G. Sonneck's study of *The Star Spangled Banner* (Washington, 1914) and Waldo Selden Pratt's *The Music of the French Psalter of 1562* (New York, 1939). Because they are scientific and authoritative, monographs are the most reliable sources of

information. In spite of their outwardly "dry" character, they often provide the telling detail that, cleverly used, will add a touch of vivid authenticity to a radio program. For example, in preparing a program on the music of the Gauchos, I consulted a scholarly monograph by Madaline W. Nichols, which provided complete details on the mode of living of the Gauchos, including dress, housing, customs, etc. As a result, the music was presented in an authentic historical setting. Sonneck's monograph, *Early Concert Life in America,* contained material for many musical programs of fascinating authenticity, as we found in preparing the broadcasts of Music in American Cities for the NBC University of the Air.

d. Bibliographies. A bibliography is a list of references on a particular subject, or a list of the writings of a particular author. The best informed person is not always the one who carries the most knowledge in his head, but the one who knows exactly where to go to get the information needed on any subject. That is where bibliographical knowledge is important. As has been stated before, every reference work worthy of the name contains extensive bibliographies. In addition, there are entire books consisting solely or principally of bibliographical information. If you wish to find your way through an unfamiliar field, begin by consulting one of these specialized bibliographies. Then you can pick out the references that seem most suitable to your needs.

2. *Musical sources.* See the chapter on Building the Musical Program for the ordinary sources of published music (page 30). Old, rare, and difficult-to-find music can usually be located in the following printed sources:

a. Historical collections. Most countries have published extensive scholarly editions of their old music known in musicological terminology as "musical monuments." The following are some of the more important collections:

The English Madrigal School, 36 vols., ed. by H. E. Fellowes.

The English School of Lutenist Song-Writers, 2 series of 16 vols. each, ed. by H. E. Fellowes.

Les Maîtres musiciens de la renaissance française, 23 vols., ed. by H. Expert. Continued as *Monuments de la musique française au temps de la renaissance,* 10 vols.

Old English Edition, 25 vols., ed. by G. E. P. Arkwright.

Trésor musicale, 58 vols., ed. by R. J. van Maldeghem (sacred and secular music of the 16th century).

Tudor Church Music, 10 vols. (English Church music of the 16th and 17th centuries).

Denkmäler deutscher Tonkunst, 65 vols. (Monuments of German Music).

Denkmäler der Tonkunst in Oesterreich, 83 vols. (Monuments of Music in Austria).

Denkmäler der Tonkunst in Bayern, 36 vols. (Monuments of Music in Bavaria; published as second series of *Denkmäler deutscher Tonkunst*).

Classici della musica italiana (*Raccolta nazionale delle musiche italiane*), 36 vols., ed. by Gabriele d'Annunzio and others.

For a complete list of historical editions, with contents of each series, see *Harvard Dictionary of Music,* under "Editions, Historical." Most of these collections can be found in major American libraries.

b. Complete editions. It often happens that some of the great composers are known only by a few of their more popular works. This is the case with Handel, for instance, and also, to a lesser extent, with Mozart and J. S. Bach. Complete scholarly editions of the works of great composers, which are available in large libraries, will often yield worth-while unfamiliar material to the program builder who wishes to venture from the beaten path. The performance of all the church contatas of J. S. Bach,

in a broadcast series directed by Alfred Wallenstein, is a case in point.

c. Unpublished music. Unpublished music may be either old or new. Transcribing old musical manuscripts is a highly specialized task, which would better be left to the experts. When it comes to the transcription of medieval music, even the experts differ; but that is a recondite subject over which the scholars can dispute indefinitely, while radio must be content to use whatever practical editions of medieval music may be available —on the rare occasions when broadcasters wish to venture into the Dark Ages. Readers who want scholarly information on medieval music and modern transcriptions of it, may consult Gustave Reese's *Music in the Middle Ages* (New York, 1940) or Willi Apel's *Notation of Polyphonic Music* (Cambridge, 1942). Turning to our own times, it is true that composers of "serious" music often find it difficult to get their works published, especially those in the larger forms, such as operas, symphonies, and concertos. For this reason, a considerable amount of modern music is performed from manuscript copies. The Fleisher Music Collection of the Philadelphia Free Library has copies of many unpublished works by living composers of North and South America, which are loaned for performance under certain conditions.

Obviously, many of the historical editions and complete collections mentioned above will not be available except in the music libraries of our largest cities. How, then, can persons elsewhere make use of them? The answer is, through photostats. This inexpensive method of reproduction is available to the public in most of our larger libraries. The Library of Congress and the New York Public Library supply many thousands of photostats to the public each year, at very reasonable fees. As a rule, a negative photostat on bromide paper is quite legible and can be used for most practical purposes. A positive photostat,

slightly more costly, is preferable when the copy has to be used for actual performance, especially if it is an orchestral score. Naturally, before the copy can be ordered, it is necessary to know exactly what is to be photostated. That is, the order must supply such information as the complete title of the work; the author or composer; if possible, the date and place of publication; and the number of pages to be photographed. The staff of the music division in any one of our large public libraries is able and willing to assist in locating out-of-the-way music, but the actual photostating is done by a separate department. Microfilming is another practical and inexpensive method of copying rare material. An entire score can be copied on microfilm at comparatively little cost. Of course, in order to be used, the microfilm must be developed and enlarged or "blown up," which is a more expensive process. For study purposes, microfilm copies can be easily read with a special reading machine. In recent years, much has been accomplished in building up archives of microfilmed music. See, for example, Otto E. Albrecht's article on "Microfilms and Musicology" in *Papers of the American Musicological Society,* 1938.

An excellent guide to musicological sources is included in Glen Haydon's *Introduction to Musicology* (see bibliography for this chapter), under the following headings: Bibliographies; Encyclopedias and Dictionaries; Histories of Music; Periodicals; Collected Writings; Complete Editions; Modern Collections of Older Music.

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Opera in Television

BY HERBERT GRAF

THE problem of handling music in television obviously involves a wide field, and although opera is our particular concern here, it may be well first to take a look at the major problem, music in television.

CONCERT MUSIC

The big field of concert music, which includes singers, instrumentalists, choruses, and orchestras, poses various problems for television. For instance, should anything else be shown than the performing musician in person? It is likely that this will prove visually sufficient only in rare cases, when the artist possesses a fascinating personality as well as musical genius. Instead, the camera might wander around to show close-ups of the face, fingers, or certain instrumental groups. But the use of this technique also is limited, for, in my opinion, it is most disconcerting to listen to a sweet pastoral melody being played and at the same time to see the strained, distorted face of the flutist. Camera switches during a musical selection will often prove distracting, as I quickly discovered when I was in charge of a concert by the young pianist, William Kapell, in the NBC studio. My constant camera changes detracted considerably from the music that the artist was trying to convey. The same is true, I believe, in certain portions of the Toscanini film made for the Office of War

Information, where the effect of the conductor's unique personality and beautifully played music is often distorted by the visually uninteresting faces of the players.

Another way that might be used is dramatization of concert music by visual illustration of the contents of the music, rather than actual views of the musicians. A great example of this kind of visual interpretation of music is given in the Stokowski-Disney film *Fantasia*. But this, again, is a delicate problem, since it is one of the happy advantages of concert music that each human mind can wander into its own wide paths of imagination. While one person might be satisfied with a particular form of visual illustration, another might have a quite different feeling about it. Therefore, visual interpretation of concert music becomes, in most cases, something imposed on the individual mind. Remember, for instance, the interpretation of Beethoven's *Pastoral Symphony* in the film *Fantasia*. There was predominant an entirely Greek conception, with nymphs and sea tritons, which shocked me, who, as a born Viennese, knew well the type of landscape in the vicinity of Vienna that inspired in Beethoven this pastoral mood.

However, if the thing is well done there is, in spite of all these dangers, sometimes a possibility of showing the surroundings and even the contents of concert music in a realistic or a surrealistic way. For instance, we produced at NBC a Stephen Foster program based on his "Old Folks at Home." Two approaches seemed possible: (1) to produce an old American home as the frame for a group of singers, who would sing the songs; or (2) to illustrate the contents of the songs by showing the cotton fields, rivers, darkies, etc., on film or in still pictures. To do this kind of illustration well is more difficult than it might seem, and probably the combination of both ideas is advisable. This we did, adding live scenes to dramatize various episodes in the life of the composer.

Summing up, three ways of handling concert music are available:

1. Concert photography—as if we were attending the concert with a camera in the concert hall.
2. Producing suitable optical background for music, such as was done by Ernest Colling in *Barndance*—showing a barn as a frame for barn dances; or *Singing War,* where a little French café was used as a background for the most popular songs of the First World War.
3. Visual illustration of the contents of music, either by realistic treatment, showing the subjects (darkies, plantations, etc.), or by surrealistic treatment, as in Disney's *Fantasia,* or by a kaleidoscope.

The best method, indeed, might be a combination of all three ways, used in accordance with the character of the music to be performed.

DRAMATIC MUSIC

It is obvious that television—more than radio—offers the golden opportunity for those forms of music which are meant to be visual: musical comedies, operettas, ballets, and opera. Naturally, radio cannot do them real justice, although it has found clever ways to substitute narration, sound effects, and other suggestive acoustical devices for the missing vision. Here television ought to become a really legitimate medium.

Before taking up the main subject of this discussion, I wish to make it clear that I see opera in a somewhat different way than is usual in this country. I do not look upon opera merely as that form of "grand" opera which is performed at the Metropolitan and by other opera companies, separated by a wide gap from light opera and "Broadway" musical shows. On the contrary, I feel strongly that this gap ought to be bridged, and I believe that

this is now actually being accomplished. Opera is any form of musical drama in which music is not incidental but essential, whether it be grand opera as in the case of *Aïda* or *Carmen,* or light opera such as *The Bat* (*Rosalinda*), or American folk opera such as *Porgy and Bess* or *Showboat.* So in the course of the following discussion, please accept the term "opera" in this broader sense.

First, I should like to illustrate the particular operatic situation in America with some personal experiences. It was in the summer of 1930 that I came for the first time to America from my native Vienna. Of course, I was fascinated by the wonders of the "New World," by the architecture and the modern ways of life. I heard a new standard of sound pictures (it was *The Rogue Song* with Lawrence Tibbett), wonderful orchestras, a moving musical play, *Green Pastures.* All this conformed with what I had visualized as American musical theater.

I could not understand, however, why this most modern country had, speaking in general, an old-fashioned form of opera—one that was even behind European standards. This opera, which belonged to only a limited wealthy society, was imported and presented in its original European forms, sung in foreign languages, and produced in a way that was far behind the accepted Broadway standards. Obviously, this type of opera was far removed from the feeling of the American people, and it seemed that the famous critic was right who gave the definition of opera as the art in which everything that is too stupid to be spoken is sung.

At that time, I expressed my opinions frankly in some interviews, but I received bad notices. For instance, one paper made fun by saying, "Graf Plans New Deal for Opera in America!" So, instead of continuing my arguments, I got to work and staged operas and operettas all over the country, in order to learn the particular American conditions.

Meanwhile, times changed. Radio developed millions of new listeners who were interested in music, including opera. In fact, it was this new audience that saved opera when its existence was endangered by the changing fortunes of its original sponsors, owing to the depression. At that time a change began, which is still in progress, toward a more democratic form of opera.

The success of the nationwide Metropolitan Opera broadcasts on Saturday afternoons, the new popular-priced opera at the New York City Center; Billy Rose's production of *Carmen;* Gershwin's *Porgy and Bess; Oklahoma;* revivals of classic operettas, such as Johann Strauss's *Rosalinda* and Lehar's *Merry Widow;* and recently the success of *Song of Norway* on Broadway, show this trend.

Popularization of opera and operetta. This popularization of opera and operetta will, in my opinion, be greatly expanded by television, which, by bringing sight to sound, makes the picture of an opera performance complete.

Some television companies have already made interesting experiments in this field. NBC first televised opera by producing scenes from *Pagliacci* with a Metropolitan Opera cast, on March 10, 1940. General Electric followed with a number of opera and light-opera productions under Robert E. Stone, who has a fine sense for music. General Electric has so far produced three operas and eleven light operas. A Gilbert and Sullivan operetta has recently been seen at Dumont's station.

I produced at NBC during the summer of 1944 four different types of operatic programs: a thirteen-minute scene from *La Bohème;* one dramatized aria, Figaro's song from *The Barber of Seville;* one condensed version of an entire grand opera, *Carmen* (in forty-five minutes); and one condensed version of an operetta, Johann Strauss's *The Bat.* We hope to do more grand and light opera at NBC in the near future.

The experiments proved that opera can be "natural" and that

television forces it to become so. It also has become obvious that television requires new methods of operatic production—at least, as far as present opera telecasts that originate from television studios are concerned. Telecasts from an opera house seem, for technical reasons, to belong to the future; and even if this should later become technically possible, it is doubtful whether such television broadcasting of opera will look satisfactory, from the artistic point of view, on the television screen. The methods of operatic production required in the near future can, in a nutshell, be summarized as follows: lesser quantity and more quality of voice, diction, gesture, and personal appearance.

Special requirements for television in opera. Viewpoints which in grand opera are still heatedly debated, such as the language problem, are decided in television by the medium itself. For television—being a technique which stylistically lies midway between opera comique and film—is a natural technique, favoring realism more than the usual production of grand opera. As such, it gives preference to dialogue over recitative, to the use of the language of the audience rather than a foreign language, to realistic gesture before operatic stylization. It also requires a well-rehearsed ensemble with exact planning and placing of every detail of action for the establishment of camera shots, which cannot—as in films—be corrected, once the performance is under way. This practically excludes last-minute improvisations of stars, however brilliant they may be on an operatic stage, and requires accomplished artists willing and able to subordinate themselves under the ensemble idea. For these reasons, a quite different type of singer is needed—good in looks as well as voice, and with a relaxed facial expression while singing. You can well imagine that many well-known singers, in spite of their musical ability, cannot get rich in television, because their appearance or gestures are not suitable to the medium. Of course, it is not a simple matter to get singers who, in addition to

having good voices, good looks, and good acting ability, must memorize new versions and go through many rehearsals, under comparatively modest financial conditions.

Here, interesting vistas open up for future artistic and organizational problems, which it would be impracticable to discuss with sufficient detail now. There is a wide field opening up for producers, writers, composers, and artists. There is a wealth of vocal talent in this country, for whom, when they are properly trained, television will offer a real opportunity.

Need for original television opera. In addition to the technical need of new production methods for the reproduction of old operas, television opens an entirely new field for opera. A new type of opera is now required, namely, original television opera, to be written especially for this medium. In this respect, it is hoped that writers and composers of the future will take full advantage of the new technical possibilities, the combination of dialogue and music, variety of scenes, the use of slides and film. Most valuable of the potentialities at their disposal is the possibility of the full facial expression and details of action by means of camera close-ups, such as cannot be realized in the vast spaces between stage and audience in the opera theater.

I believe, nevertheless, that we shall have to be careful in the way we modernize old operas, in order not to ruin them. People will be needed who *know* operatic techniques of the past and yet have the courage to go ahead on that basis and far beyond it, and who, in addition, are practical enough to operate under reasonable financial conditions.

Summing up, I should like to say that the American people are a most musical people and that the popularization of music, including opera, has made great progress during the last ten years. Radio has popularized concerts, and now television will, in my opinion, have the same influence on opera, both grand and light. It will bridge the unnatural gap that exists today be-

tween those two forms and that makes many believe that opera and common sense cannot go along together.

Television will be the democratic medium that will make opera take off its top hat and speak in every way the language of the people. By so doing, it will contribute decisively to the opening of a new chapter in the history of opera in this country —a chapter that might be called "Opera as an art of the people."

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